



**DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY
AFFAIRS (PERA)
BOARD AND CODE ADMINISTRATION DIVISION
NOTICE OF ACCEPTANCE (NOA)**

**MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION**
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/pera/

**Arrow United Industries
450 Riverside Drive
Wyalusing, PA 18853**

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County PERA - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. PERA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code. This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Model EA-64 6" deep Aluminum Louver

APPROVAL DOCUMENT: Drawing No. 1464, titled "EA-64 Louver System", sheets 1 through 15 of 15, dated 12/02/2005, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren. W. Schaefer, P.E., bearing the Miami-Dade County Product Control revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA # 08-1224.03 and consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



[Signature]
01/12/2012

**NOA No. 11-1117.09
Expiration Date: April 22, 2014
Approval Date: January 19, 2012
Page 1**

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. 1464, titled "EA-64 Louver System", sheets 1 through 15 of 15, dated 12/02/2005, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E.

B. TESTS "Submitted under NOA No. 08-1224.03"

	<u>Test Report</u>	<u>Test Standard</u>	<u>Test Date</u>	<u>Signature</u>
1.	HTL 0198-0508-03	TAS 201,202 & 203	05/15-10/03	V.J.Abraham, P.E.
2.	HTL 0198-0618-03	TAS 201, 202 & 203	06/06-25/03	V.J.Abraham, P.E.
3.	HTL 0198-0804-03	TAS 201, 202 & 203	08/06-08/03	V.J.Abraham, P.E.
4.	HTL 0198-0508-03	TAS 201, 202 & 203	05/08-13/03	V.J.Abraham, P.E.
5.	HTL 0198-0804-03	TAS 201, 202 & 203	08/08-11/03	V.J.Abraham, P.E.
6.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-26/03	V.J.Abraham, P.E.
7.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-04/16	V.J.Abraham, P.E.
8.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-24/03	V.J.Abraham, P.E.
9.	HTL 0198-0324-03	TAS 201, 202 & 203	03/25-04/21	V.J.Abraham, P.E.
10.	HTL 0198-0128-03	TAS 201, 202 & 203	02/10-04/21	V.J.Abraham, P.E.
11.	HTL 0198-0508-03	TAS 202	05/13-13/03	V.J.Abraham, P.E.
12.	HTL 0198-0324-03	TAS 202	03/27-27/03	V.J.Abraham, P.E.
13.	HTL 0198-0324-03	TAS 201 & 203	03/24-04/21	V.J.Abraham, P.E.
14.	HTL G198-0101-05	TAS 201, 202 & 203	02/15/05	V.J.Abraham, P.E.
15.	AWV/AUI-011-02-01	TAS 100 (A)-95	05/13/08	Duc T. Nguyen, P.E.
16.	ATI 45720.03-122-18	TAS 100 (A)-95	01/16/09	J.A. Reed, P.E.

C. CALCULATIONS "Submitted under NOA No. 08-1224.03"

1. Anchoring calculations prepared by W.W. Schaefer Engineering & Consulting, P.A., dated 12/17/2008, signed and sealed by Warren W. Schaefer, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Permitting, Environment, and Regulatory Affairs (PERA)

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance to 2007 and 2010 FBC issued by W. W. Schaefer Engineering & Consulting, P.A., dated 11/07/2011, signed and sealed by Warren W. Schaefer, P.E.
2. No financial interest letter issued by W. W. Schaefer Engineering & Consulting, P.A, dated 11/01/2011, signed and sealed by Warren W. Schaefer, P.E.

"Submitted under NOA No. 08-1224.03"

3. Test code compliance letters issued by Hurricane Test Laboratory, Inc., dated 09/23/2003 and 01/20/2009, signed and sealed by Vinu J. Abraham, P.E.


01/12/2012

Carlos M. Utrera, P.E.

Product Control Examiner

NOA No. 11-1117.09

Expiration Date: April 22, 2014

Approval Date: January 19, 2012

FASTENER SCHEDULE

ANCHOR TYPE	(5) SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
(3) NO. 10 S.S. SCREW	WOOD	1 3/8"	3/4"
(6) NO. 10 SELF TAP SCREW	METAL STUD OR STEEL	FULL	3/4"
(1) 1/4" CONCRETE SCREW	C90 CONCR. BLOCK	1 1/4"	2 1/2"
(1) 1/4" CONCRETE SCREW	CONCRETE	1 1/2"	2"
(2) 1/4" BOLT	STEEL OR METAL STUD	FULL	3/4"
(4) 3/8" SLEEVE ANCHOR	CONCRETE	2 1/2"	2 1/2"
(2) 3/8" BOLT	STEEL	FULL	3/4"

- (1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS OR HILTI KWIK-CON II. (HARDENED STEEL OR S.S.)
- (2) BOLT SHALL BE MIN. A307 GALVANIZED OR 304 S.S. (Fv = 10,000 PSI MIN.)
- (3) WOOD SCREWS SHALL HAVE MIN. YIELD STRENGTH OF Fyb = 80,000 PSI
- (4) SLEEVE ANCHORS MAY BE GALVANIZED OR S.S. RAMSET RED HEAD DYNABOLTS OR POWERS RAWL POWER BOLT.
- (5) SEE GENERAL NOTES FOR SUBSTRATE REQUIREMENTS.
- (6) SELF TAPPING SCREWS SHALL BE CORROSION RESISTANT MIN. SAE GRADE 2 STEEL OR MIN. ALLOY GROUP 1, 2 & 3 CONDITION "A" STAINLESS STEEL.

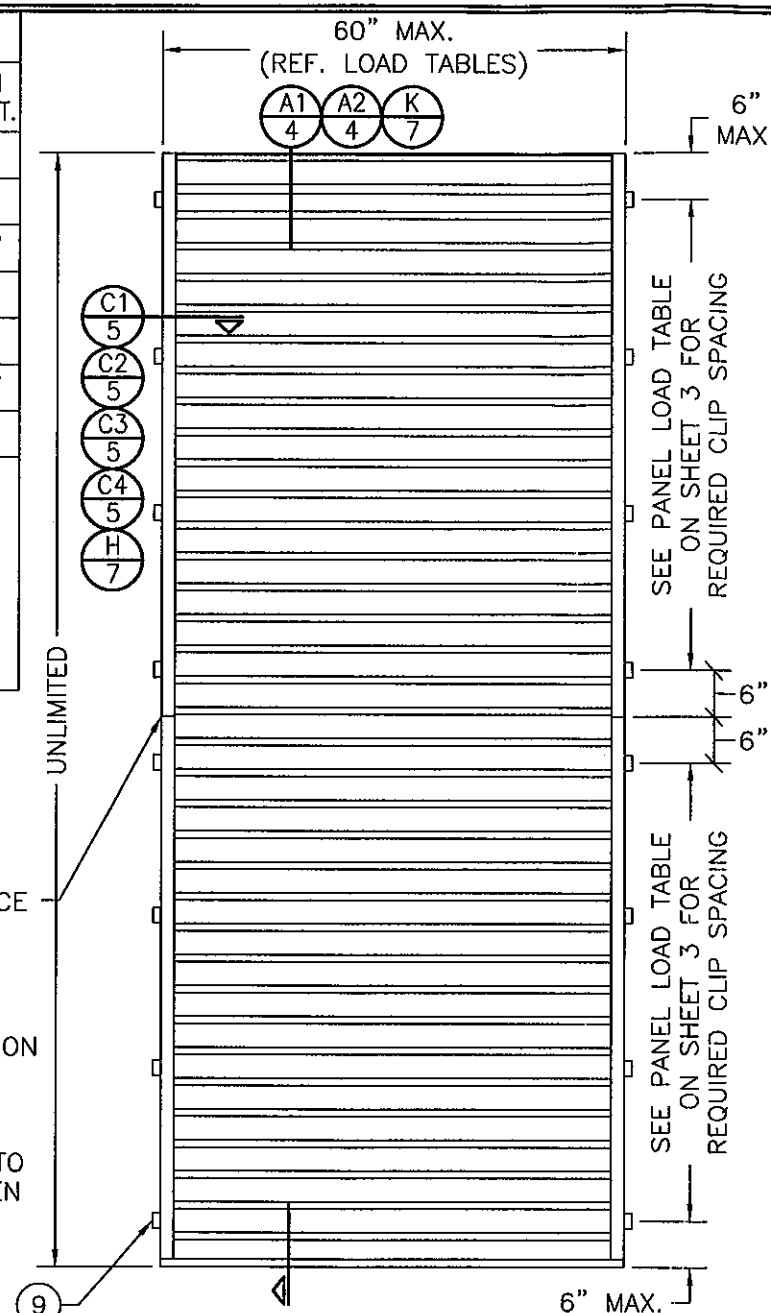
CORNER & BLADE END CONSTRUCTION

BLADE TO JAMB:
WELDED CONDITION: BLADE END BUTTS TO JAMB, IS WELDED WITH ONE 1/8" X 5" WELD AND SCREWED TO JAMB WITH WITH 2 NO. 8 X 3/4" S.S. SMS SCREWS THROUGH JAMB AND INTO BLADE SCREW SPLINES.
SCREWED CONDITION: BLADE END BUTTS TO JAMB & IS SCREWED TO JAMB WITH TWO (2) 1/4-20 X 1 1/2" TYPE "F" SCREWS THROUGH JAMB AND INTO BLADE SCREW SPLINES.
HEAD TO JAMB: HEAD FRAME IS SQUARE CUT, BUTTED AND JOINED TO JAMB WITH ONE 1/8" X 5" WELD AND 2 NO. 8 X 3/4" S.S. SMS SCREWS THROUGH JAMB AND INTO HEADER SCREW SPLINES.
SILL TO JAMB: SIDE JAMB BUTTS TO SILL AND IS JOINED TO SILL WITH THREE(3) 1/8" X 1" WELDS AND 2 NO. 8 X 3/4" S.S. SMS SCREWS THROUGH SILL AND INTO JAMB SCREW SPLINES.

JAMB SPLICE WHEN REQUIRED FOR STACKING (SEE SECTION A1/4 FOR DETAIL). SPLICE LOCATION TO BE BETWEEN BLADES.

GENERAL NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS SUPERIMPOSED BY THE LOUVERS.
- THESE LOUVER SYSTEMS HAVE BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC) AND PROTOCOLS TAS-100, 201, 202 & 203 INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
- EACH LOUVER ASSEMBLY SHALL BE PERMANENTLY LABELED AS FOLLOWS: ARROW UNITED INDUSTRIES
WYALUSING, PA
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
- ALL CONCRETE SUBSTRATE SHALL BE MIN. 3000 PSI.
- ALL WOOD SUBSTRATE SHALL BE MIN. G = 0.55 DENSITY.
- ALL METAL STUD SUBSTRATE SHALL BE MIN. 16 GA. Fy = 33 ksi.
- ALL STRUCTURAL STEEL SUBSTRATE SHALL BE MIN. 12 GA. Fy = 36 ksi.
- PANEL WIDTHS & HEIGHTS ARE LIMITED AS SHOWN IN ELEVATIONS.
- MULLED PANELS MAY BE HORIZONTALLY INSTALLED TO AN UNLIMITED NUMBER. VERTICAL STACKING OF MULLED PANELS MAY OCCUR PROVIDING A STRUCTURAL SUPPORT IS DESIGNED & INSTALLED BY OTHERS TO SUPPORT ALL LOADS TRANSFERRED FROM THE LOUVER ASSEMBLY (SINGLE PANELS MAY RUN TO UNLIMITED HEIGHT PER ELEVATION IF NO MULLION EXISTS).
- MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
- THIS SYSTEM HAS BEEN TESTED FOR WATER INFILTRATION RESISTANCE AND IS A WATER RESISTANT SYSTEM WHEN THE LOUVER BLADE ENDS ARE SCREWED & WELDED AND THE DAMPER BLADE IS ATTACHED TO THE LOUVER BLADES AS SHOWN IN SECTION "A2/4" (NOT RATED FOR WATER RESISTANCE WHEN LOUVER BLADE ENDS ARE SCREW CONNECTED ONLY). THIS SYSTEM IS ALSO A WATER RESISTANT SYSTEM WHEN THE AFD-20 DAMPER IS PLACED BEHIND THE LOUVER.
- UNLESS THE DAMPER BLADE IS ATTACHED TO THE LOUVER BLADES OR THE AFD-20 DAMPER IS PLACED BEHIND THE LOUVER, THE LOUVER IS TO BE INSTALLED IN A LOCATION WHERE THE ROOM BEHIND THE LOUVER IS DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM, AND THE ROOM WILL HOUSE WATER RESISTANT/WATER PROOF EQUIPMENT, COMPONENTS OR SUPPLIES.
- ALL DETAILS OF SHEETS 10 THRU 15 MUST COMPLY WITH THE LOUVER DETAILS SHOWN ON SHEETS 1 THRU 9. ANY DISCREPANCY IS CONTROLLED BY THE DETAILS ON SHEETS 1 THRU 9.



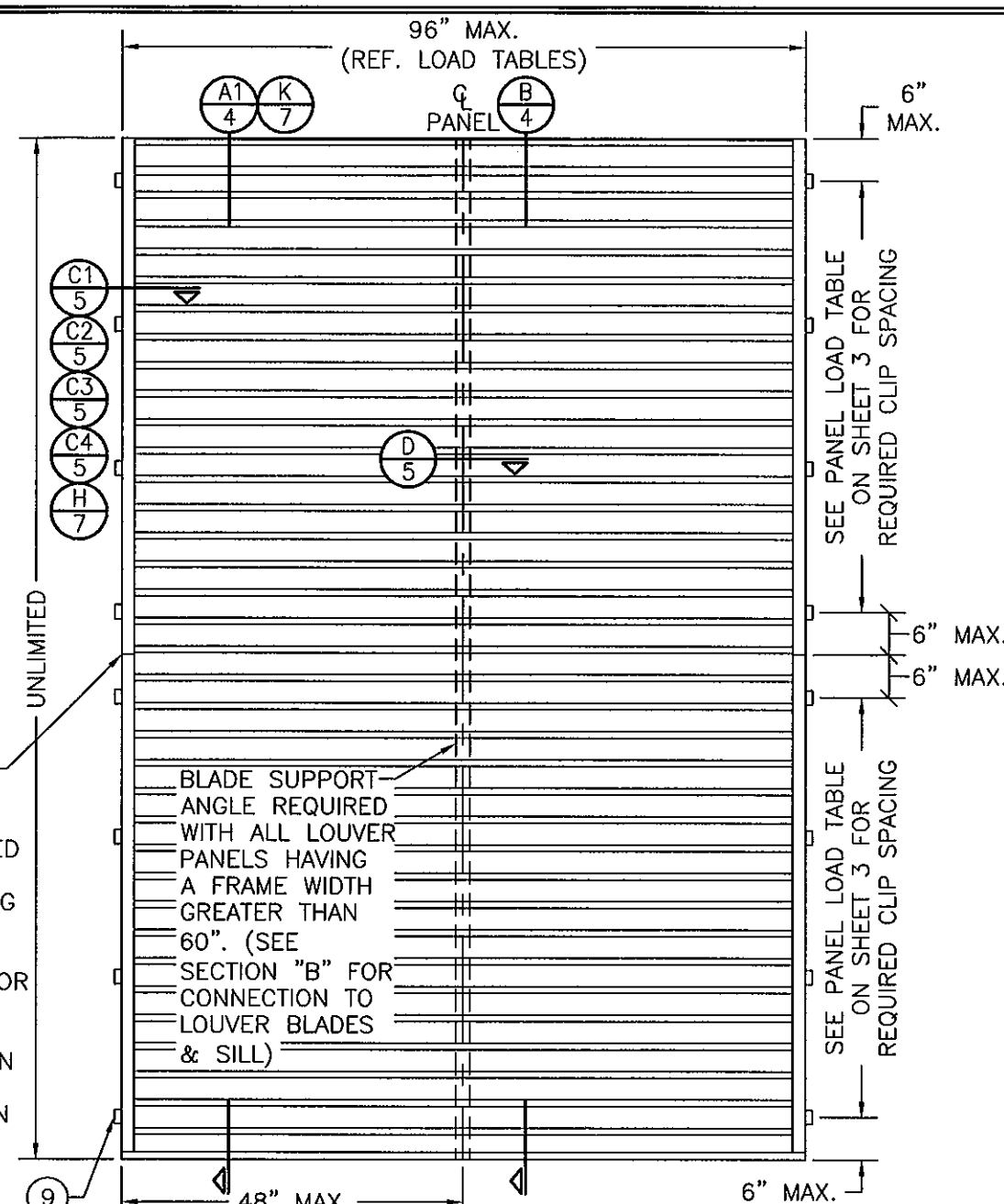
INSTALLATION CLIP (AT SIDES ONLY)

EXTERIOR ELEVATION SINGLE LOUVER PANEL WITHOUT BLADE SUPPORT ANGLE

NOTE: LOUVER PANELS MAY BE STACKED/SPLICED VERTICALLY OR THE LOUVER PANEL MAY RUN VERTICALLY TO INFINITE HEIGHT PROVIDING OPENING IS PROPERLY DESIGNED BY OTHERS TO SUPPORT THE LOUVER PANELS.

INSTALLATION CLIPS ARE NOT APPLICABLE WHEN LOUVER IS SLEEVE MOUNTED

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 11-1117.09
Expiration Date 04/22/2014
By [Signature]
Miami Dade Product Control



INSTALLATION CLIP (AT SIDES ONLY)

EXTERIOR ELEVATION SINGLE LOUVER PANEL WITH BLADE SUPPORT ANGLE

NOTE: LOUVER PANELS MAY BE STACKED/SPLICED VERTICALLY OR THE LOUVER PANEL MAY RUN VERTICALLY TO INFINITE HEIGHT PROVIDING OPENING IS PROPERLY DESIGNED BY OTHERS TO SUPPORT THE LOUVER PANELS. BLADE SUPPORT ANGLE IS CONTINUOUS FROM HEAD TO SILL AND SPLICING OF THIS ANGLE IS NOT PART OF THIS APPROVAL.

ALLOWABLE PRESSURES

PRESSURES VARY WITH PANEL SIZE, CLIP SPACING & MULLION CONDITIONS & SHALL BE CONTROLLED BY THE LESSER OF THE ALLOWABLE PRESSURE FOR EACH OF THOSE APPLICABLE CONDITIONS. SEE LOAD TABLES ON SHEET 3 FOR ALLOWABLE PRESSURES.

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

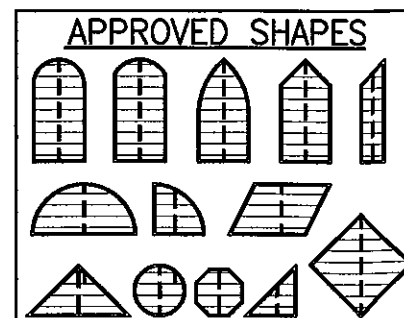
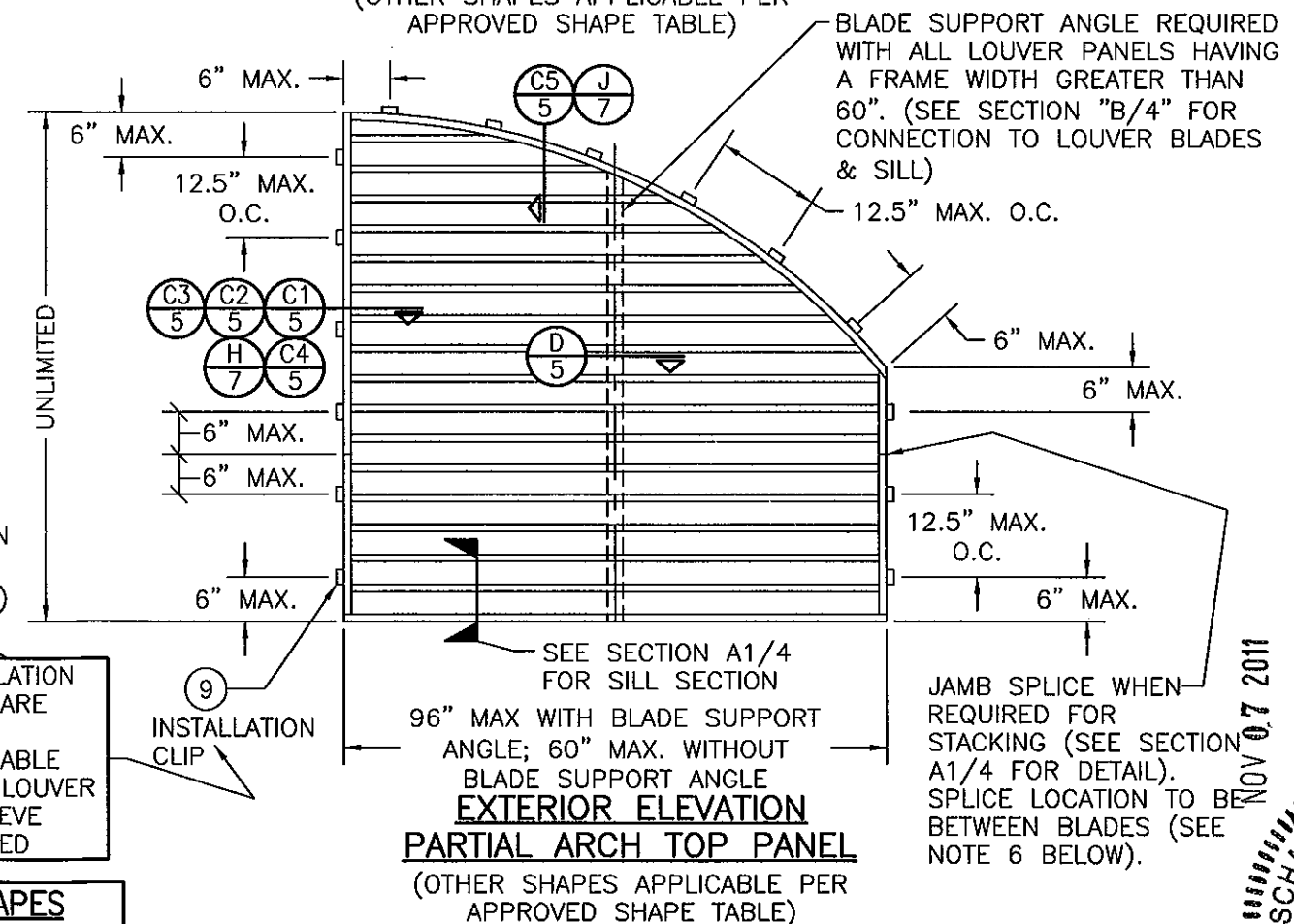
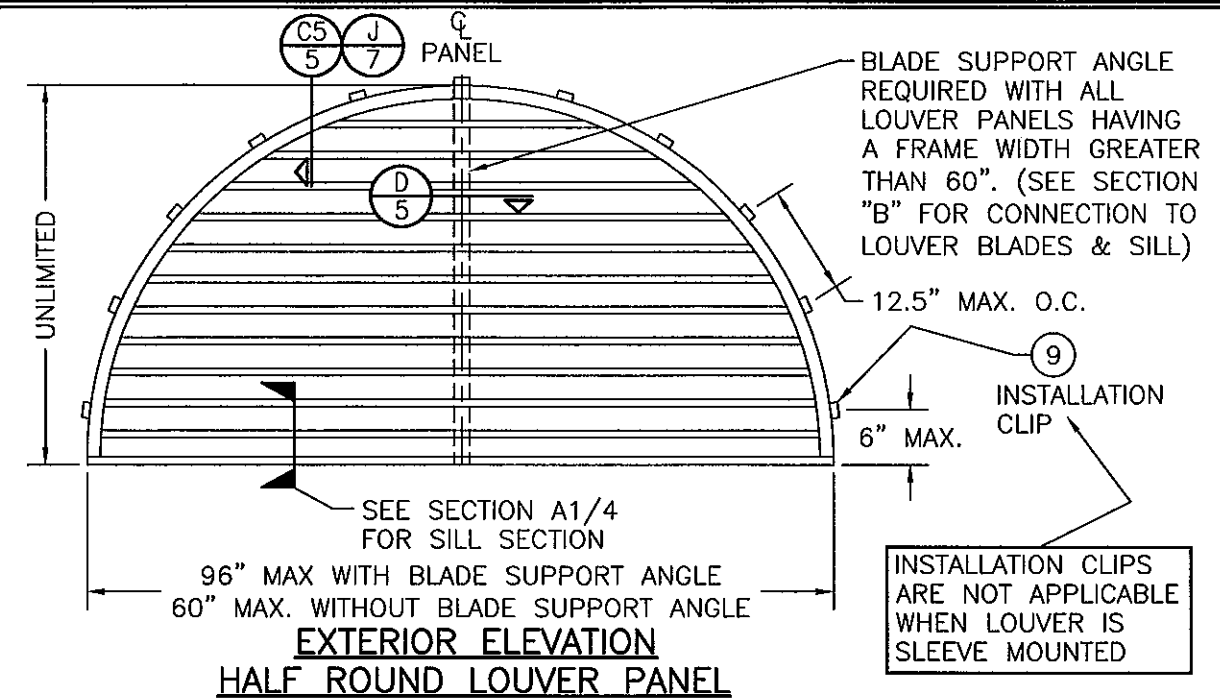
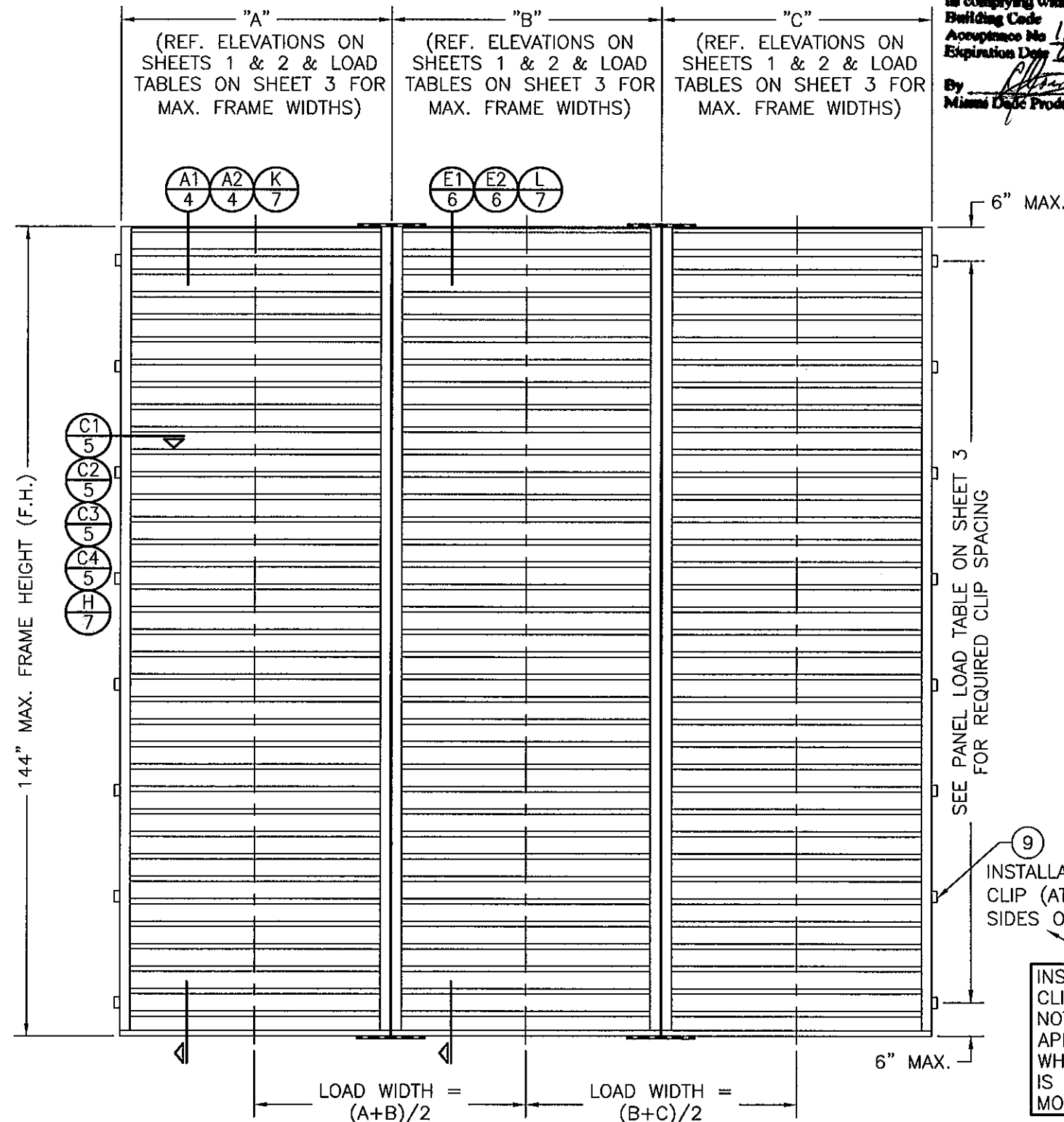
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1-24	DATE: 12/02/05
DATE 11/07/11	
BY W.R.M.	
REVISION DESCRIPTION	
NO. A1	UPDATE TO CURRENT STANDARDS

MANUFACTURER
ARROW UNITED INDUSTRIES
450 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

CONSULTANTS
W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

DRAWING NO. 1464
SHEET NO. 1 OF 15
REV. A
DATE 07/2011
W. SCHAEFER, P.E.
No. 44135
STATE OF FLORIDA
PROFESSIONAL ENGINEER

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1117.09
Expiration Date 04/22/2014
By [Signature]
Miami Dade Product Control



NOTES:

1. OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & HAVE CORNER CONSTRUCTION AS DESCRIBED ON ALL SHEETS.
2. ALL SHAPED LOUVER PANELS ARE RESTRICTED TO THE SAME PANEL WIDTHS & PRESSURE AS THE RECTANGULAR LOUVER PANELS & MAY BE STACKED VERTICALLY & HORIZONTALLY THE SAME AS THE RECTANGULAR PANELS.
3. CLIP SPACING IS RESTRICTED TO 6" FROM ENDS & 12.5" MAX. O.C. FOR ALL SHAPED LOUVER PANELS.
4. WHEN BLADES EXCEED 60" IN LENGTH (UP TO 96") BLADE SUPPORT ANGLE AND BRACKETS ARE REQUIRED AT A MAXIMUM OF 48" FROM BLADE ENDS.
5. ALL OTHER SHAPES, EXCEPT SQUARE & RECTANGULAR, MUST HAVE BLADE SUPPORT ANGLE AND BRACKETS AT CENTER OF SPAN REGARDLESS OF BLADE LENGTH.
6. SPLICES MAYNOT EXIST ON BENT OR SLOPED JAMBS. ONLY STRAIGHT VERTICAL JAMBS MAY BE SPLICED.

RECTANGULAR PANELS SHOWN; SHAPED PANELS MAY ALSO BE MULLED PROVIDING THE MULLION END CONNECTIONS ARE AS DETAILED WITH THE ABOVE RECTANGULAR ELEVATION.

EXTERIOR ELEVATION
MULLED UNITS

(3 PANEL UNIT SHOWN; MORE
THAN 3 PANELS MAY BE
MULLED/STACKED HORIZONTALLY)

[illegible]

BROW UNITED INDUSTRIES
450 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

EA-64 LOUVER SYSTEM

CONSULTANTS
W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

RAWING TITLE

WARRANT
STATE OF
NOV 07 2011
No. 44135
WILSON, W. SCHAEFER, P.
STATE, NO. 44135
CERTIFICATE
OFFER

DRAWING NO. 1464	REV. A
SHEET NO. 2 OF 15	

MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	
18"	96"	180.0	60"	96"	65.7	84"	96"	47.0	120"	96"	32.9	
24"	96"	164.3		90"	70.1		90"	50.1		90"	35.1	
	90"	175.3		84"	75.1		84"	53.7		84"	37.6	
	84"	180.0		78"	80.9		78"	57.8		78"	40.4	
	30"	96"		131.5	72"		87.6	72"		62.6	72"	43.8
90"		140.2		66"	95.6		66"	68.3		66"	47.8	
84"		150.2		60"	105.2		60"	75.1		60"	52.6	
78"		161.8		54"	116.9		54"	83.5		54"	58.4	
72"		175.3		48"	131.5		48"	93.9		48"	65.7	
66"		180.0		42"	150.2		42"	107.3		42"	75.1	
36"		96"		109.6	36"		175.3	36"		125.2	36"	87.6
		90"		116.9	30"		180.0	30"		150.2	30"	105.2
	84"	125.2	66"	96"	59.8	24"	180.0	24"	131.5			
	78"	134.8		90"	63.7	18"	175.3					
	72"	146.1		84"	68.3	96"	41.1	96"	27.2			
	66"	159.3		78"	73.5	90"	43.8	90"	29.0			
	60"	175.3		72"	79.7	84"	47.0	84"	31.1			
	54"	180.0		66"	86.9	78"	50.6	78"	33.5			
42"	96"	93.9		60"	95.6	72"	54.8	72"	36.3			
	90"	100.2		54"	106.2	66"	59.8	66"	39.6			
	84"	107.3		48"	119.5	60"	65.7	60"	43.6			
	78"	115.6		42"	136.6	54"	73.0	54"	48.4			
	72"	125.2		36"	159.3	48"	82.2	48"	54.4			
	66"	136.6		30"	180.0	42"	93.9	42"	62.2			
	60"	150.2	72"	96"	54.8	36"	109.6	36"	72.6			
	54"	166.9		90"	58.4	30"	131.5	30"	87.1			
	48"	180.0		84"	62.6	24"	164.3	24"	108.9			
	48"	96"		82.2	78"	67.4	18"	180.0	18"	145.2		
		90"		87.6	72"	73.0	96"	36.5	72"	28.0		
		84"		93.9	66"	79.7	90"	39.0	66"	30.5		
78"		101.1		60"	87.6	84"	41.7	60"	33.5			
72"		109.6		54"	97.4	78"	44.9	54"	37.3			
66"		119.5		48"	109.6	72"	48.7	48"	41.9			
60"		131.5		42"	125.2	66"	53.1	42"	47.9			
54"		146.1		36"	146.1	60"	58.4	36"	55.9			
48"		164.3		30"	175.3	54"	64.9	30"	67.1			
42"		180.0	24"	180.0	48"	73.0	24"	83.9				
108"		36"	97.4	42"	83.5	42"	83.5	18"	111.8			
		30"	116.9	36"	116.9	36"	97.4					
	24"	146.1	30"	116.9	30"	116.9						
	18"	180.0	24"	146.1	24"	146.1						
			18"	180.0	18"	180.0						

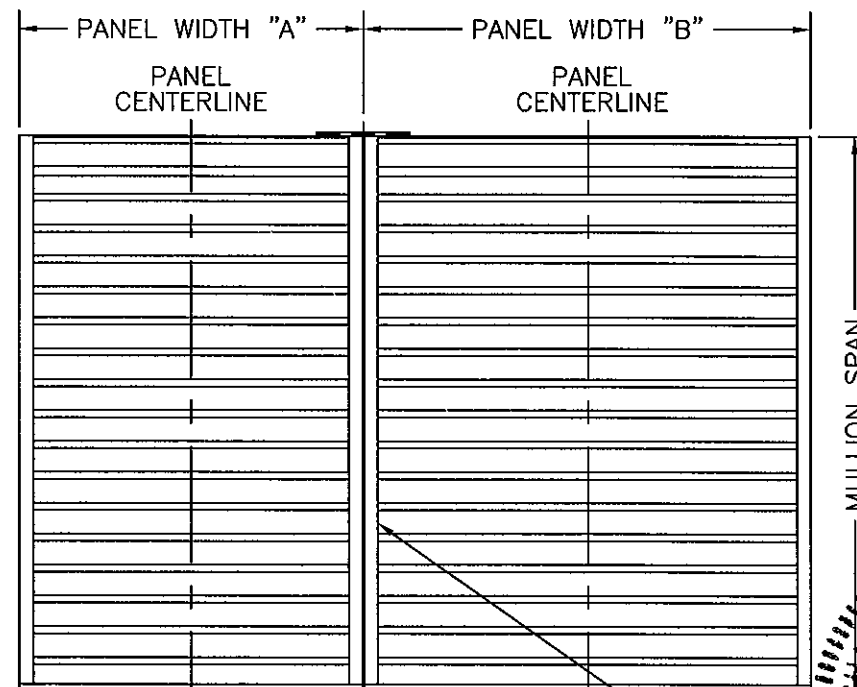
LOAD TABLE INSTRUCTIONS:

REQUIRED DESIGN PRESSURE OF THE LOUVER ASSEMBLY.

1. DETERMINE REQUIRED DESIGN PRESSURE OF THE LOUVER ASSEMBLY.
2. DETERMINE THE REQUIRED MULLION SPAN OF THE LOUVER ASSEMBLY.
3. DETERMINE THE PANEL WIDTH "A" & "B" AND THE MULLION LOAD WIDTH.
4. GO TO THE MULLION LOAD TABLE AND CHECK THE ALLOWABLE PRESSURE FOR THE RESPECTIVE MULLION SPAN/LOAD WIDTH.
5. GO TO THE PANEL LOAD TABLE AND CHECK THE ALLOWABLE PRESSURE FOR EACH PANEL WIDTH.
6. IF ALL THE ALLOWABLE PRESSURES OF INSTRUCTIONS 4 & 5 ARE GREATER THAN THE REQUIRED DESIGN PRESSURE, THE ASSEMBLY IS ACCEPTABLE.
7. IF ANY ALLOWABLE PRESSURE OF INSTRUCTIONS 4 & 5 ARE LESS THAN THE REQUIRED DESIGN PRESSURE, THE ASSEMBLY IS NOT ACCEPTABLE UNLESS THE ASSEMBLY SIZE OR PRESSURE IS REDUCED AND INSTRUCTIONS FROM 1 TO 7 ARE FOLLOWED AGAIN.

PANEL WIDTH (IN.)	(1) CLIP SPACING (IN.)	(2) ALLOWABLE PRESSURE (+/- PSF)	PANEL WIDTH (IN.)	(1) CLIP SPACING (IN.)	(2) ALLOWABLE PRESSURE (+/- PSF)
36"	12.5"	180.0	72"	12.5"	100.0
	20"	127.3		20"	63.6
42"	12.5"	154.3	78"	12.5"	92.3
	20"	109.1		20"	58.7
48"	12.5"	120.0	84"	12.5"	85.0
	20"	95.5		20"	54.5
54"	12.5"	106.7	90"	12.5"	80.0
	20"	84.8		20"	50.9
60"	12.5"	90.0	96"	12.5"	75.0
	20"	76.4		20"	47.7
66"	12.5"	109.1			
	20"	69.4			

THE LESSER LOAD FROM THE MULLION LOAD TABLE & THE PANEL LOAD TABLE SHALL CONTROL AS THE ALLOWABLE FOR THE ENTIRE MULLED UNIT.



LOUVER ASSEMBLY

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1117-09
Expiration Date 04/24/2014
By [Signature]
Miami Dade Product Control

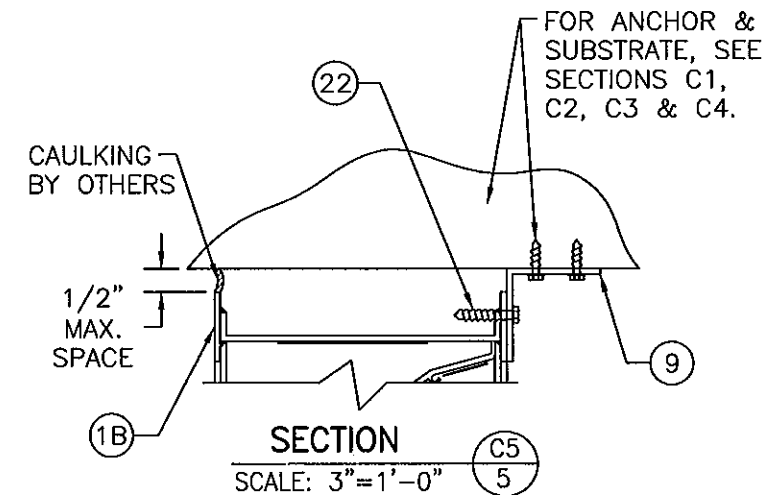
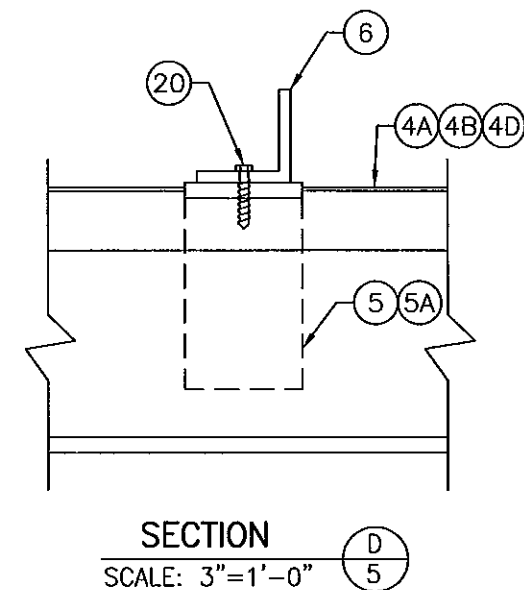
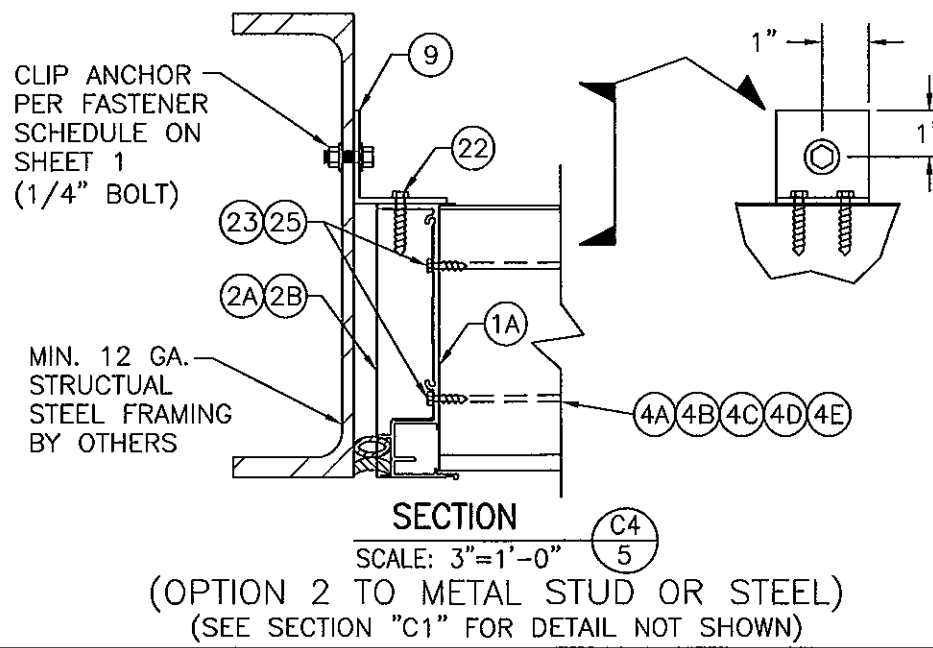
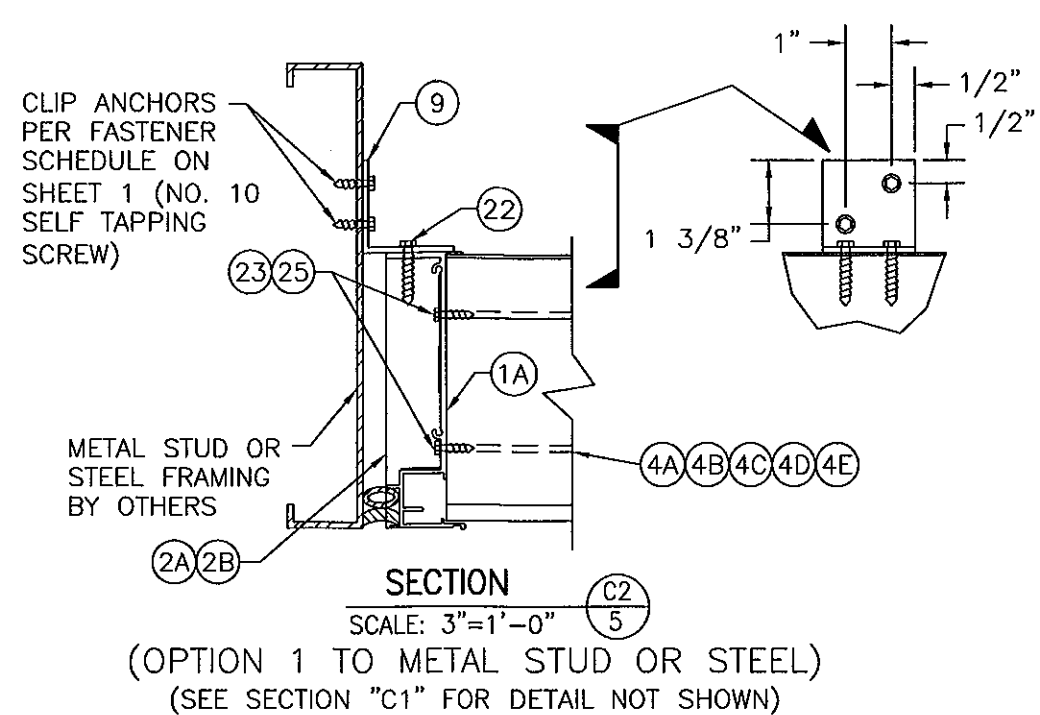
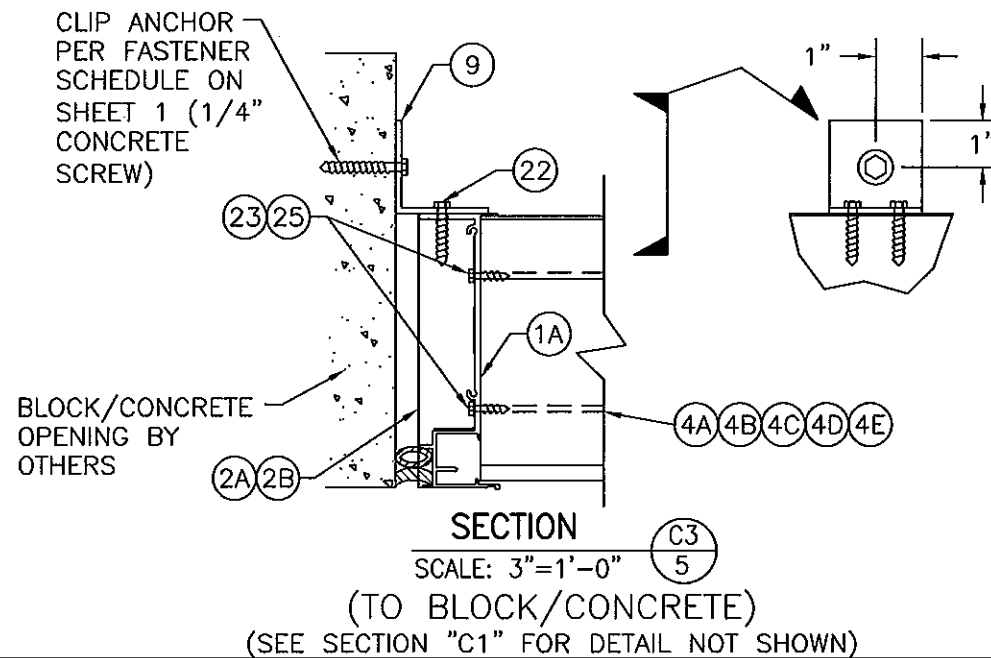
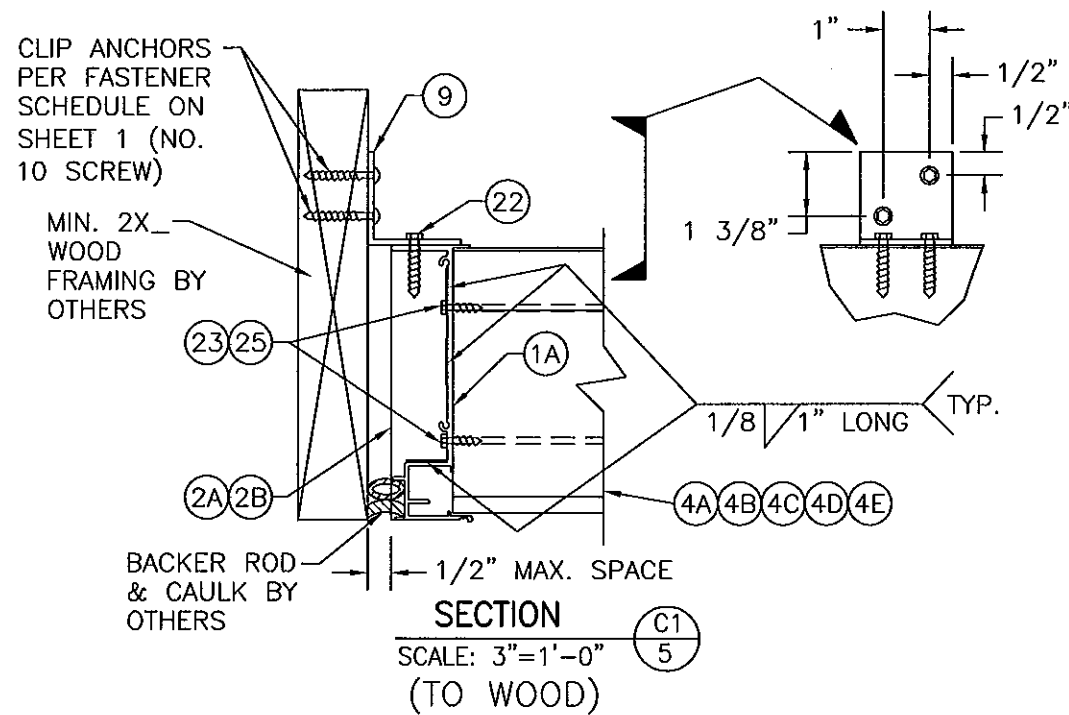
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ITEM	MANUFACTURER
	ARROW UNITED INDUSTRIES 450 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888

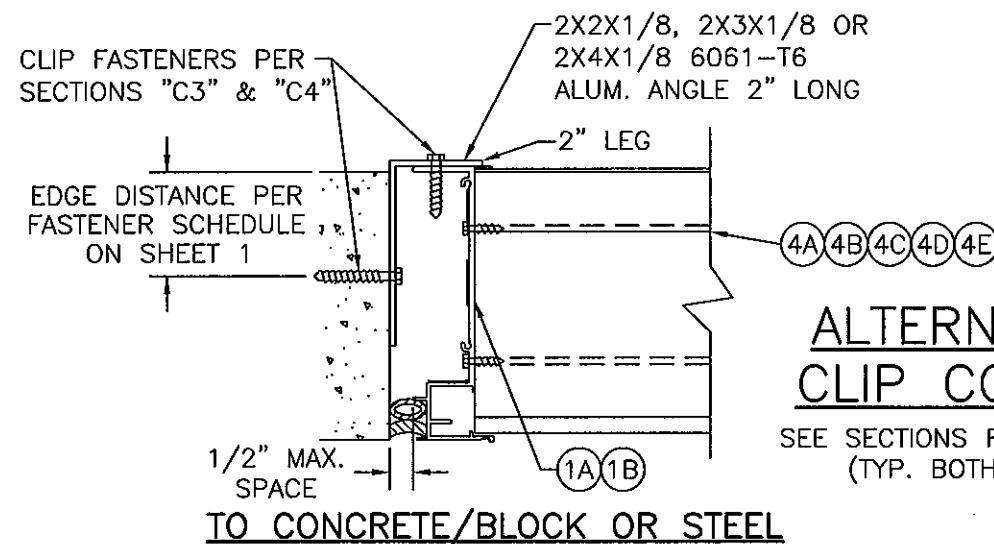
DRAWING TITLE	EA-64 LOUVER SYSTEM
	CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424

AMERICAN SOCIETY OF MECHANICAL ENGINEERS
MECHANICAL ENGINEER
NO. 44130

SHEET NO.
3 OF 15

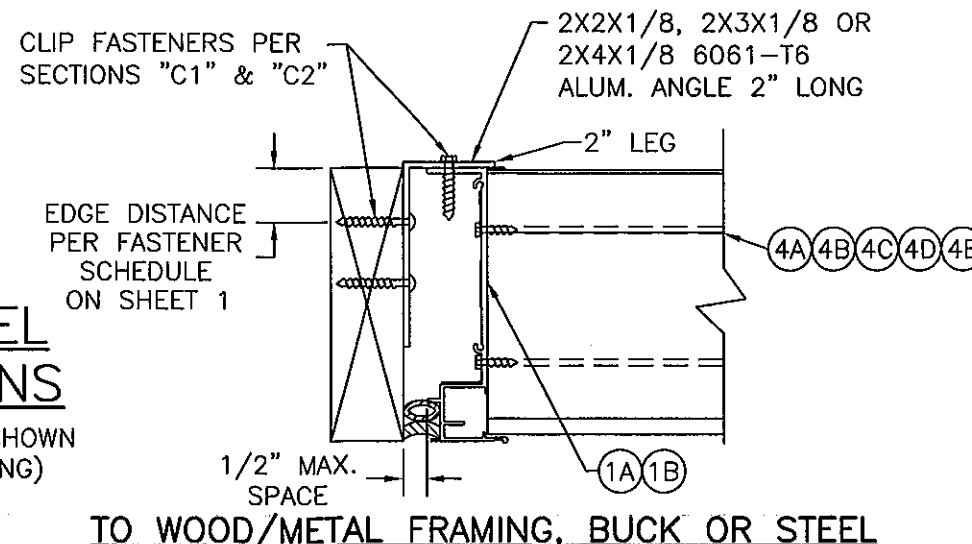


PRODUCT REVISED
to comply with the Florida
Building Code
Acceptance No. 11-1117.09
Expiration Date 04/22/2014
By [Signature]
Miami/Dade Product Control



ALTERNATE PANEL CLIP CONNECTIONS

SEE SECTIONS FOR DETAIL NOT SHOWN (TYP. BOTH SIDES OF OPENING)

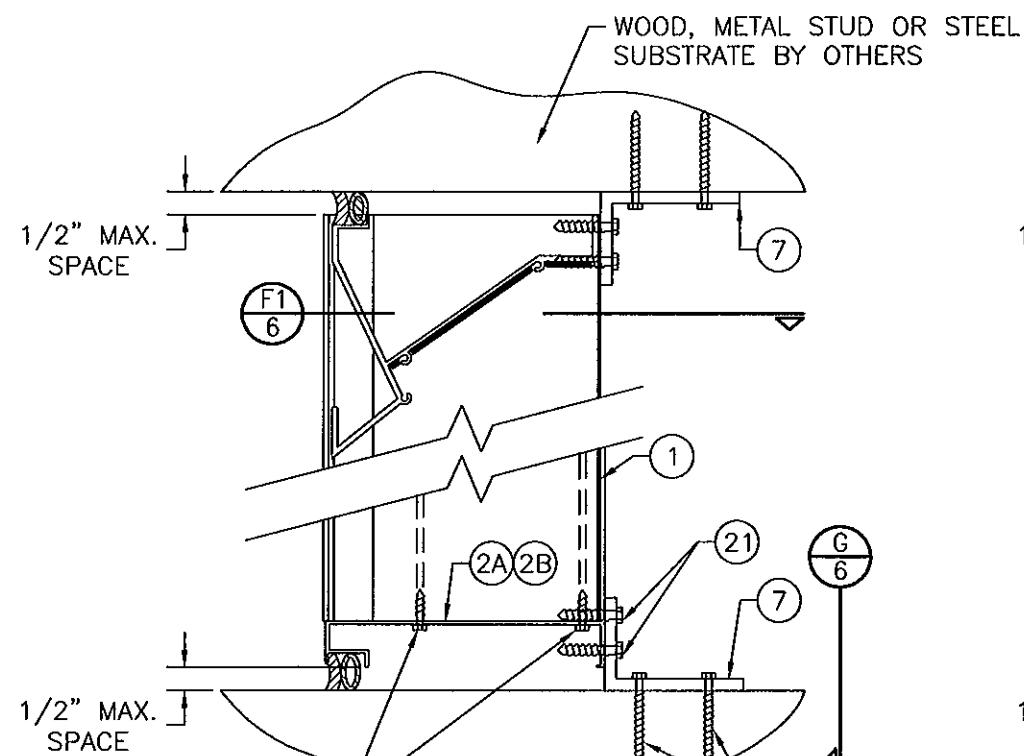


DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 12/02/05
DATE	BY
REVISION	DESCRIPTION
NO.	

DRAWING TITLE	EA-64 LOUVER SYSTEM
CONSULTANTS	W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)
MANUFACTURER	ARROW UNITED INDUSTRIES
	450 RIVERSIDE DRIVE, WYALUSING, PA 18853 570-746-1888
	7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424

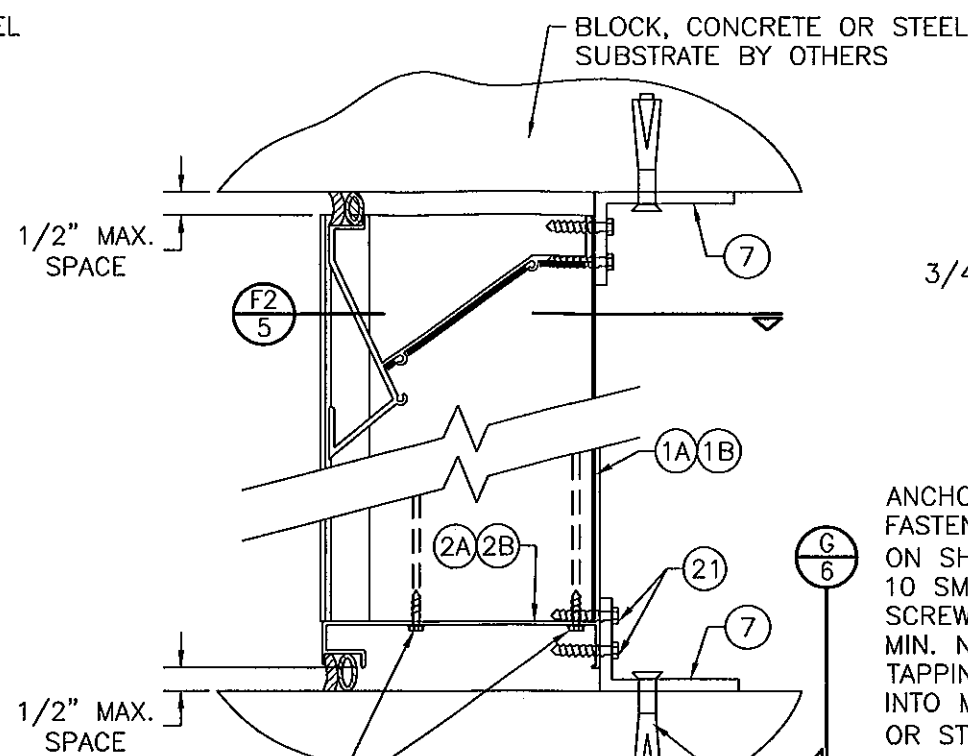
CERTIFICATION	NOV 07 2011
	WARREN W. SCHAEFER, P.E. P.E. NO. 44135

DRAWING NO.	1464
SHEET NO.	5 OF 15



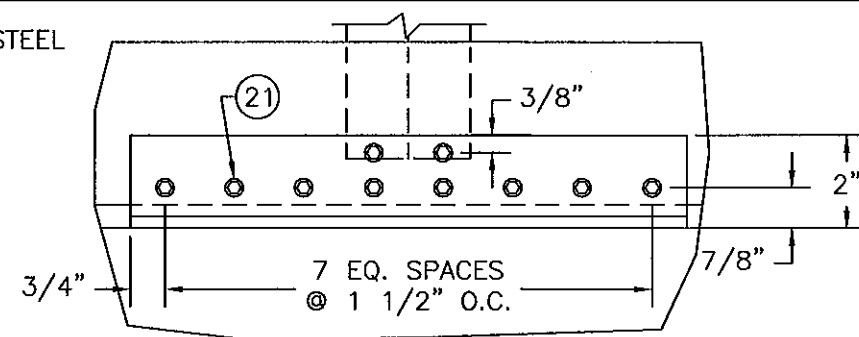
SECTION E1
SCALE: 3"=1'-0"
(INTO WOOD, METAL STUD OR STEEL OPENING)

ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (NO. 10 SMS OR WOOD SCREW INTO WOOD; MIN. NO. 10 SELF TAPPING SCREW INTO METAL STUD OR STEEL)

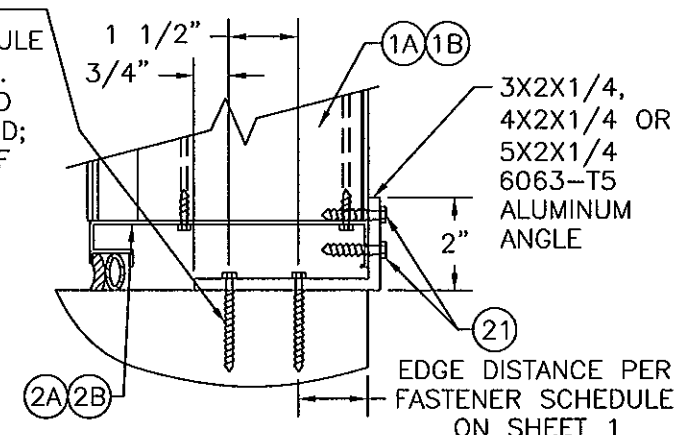


SECTION E2
SCALE: 3"=1'-0"
(INTO CONCRETE OR STRUCTURAL STEEL OPENING)

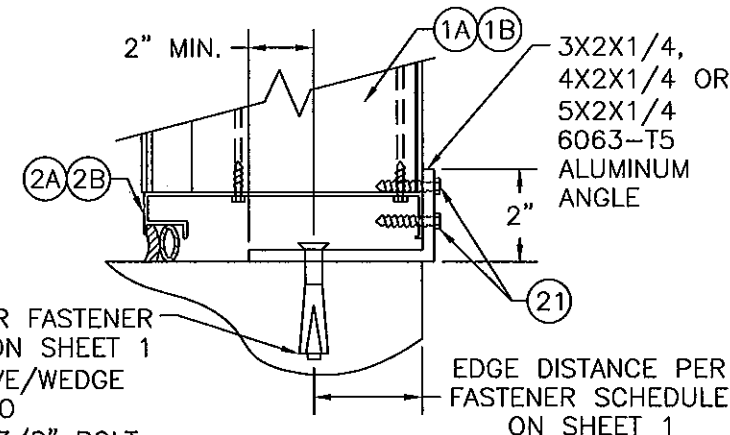
ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (3/8" SLEEVE/WEDGE ANCHOR INTO CONCRETE; 3/8" BOLT INTO STEEL)



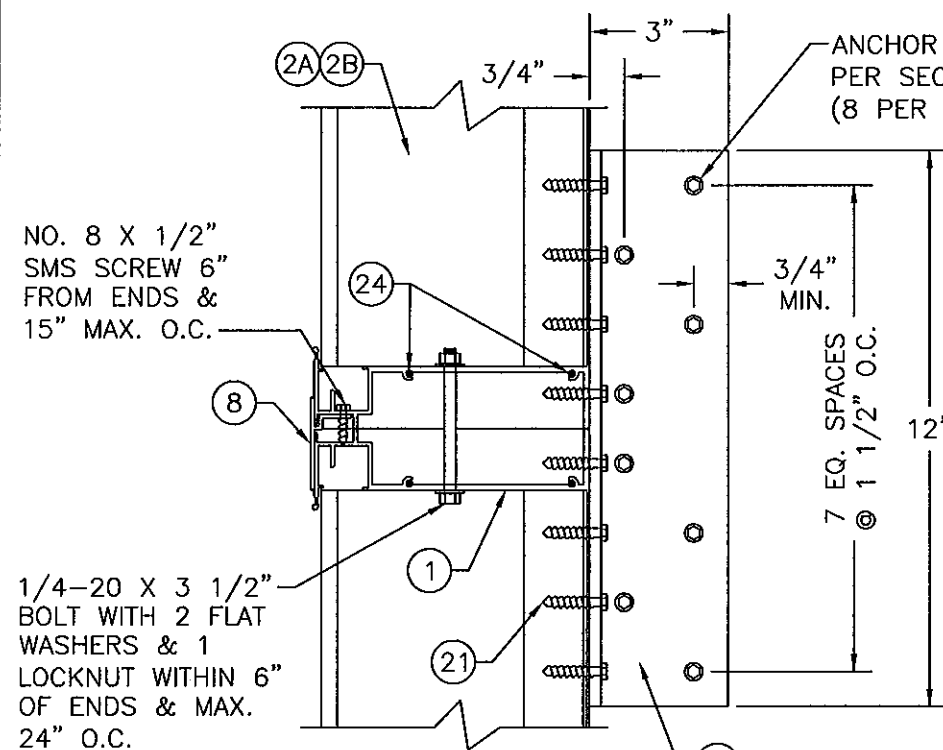
VIEW G
SCALE: 3"=1'-0"
(SEE SECTION E1/6 OR E2/6 FOR ANCHORS TO OPENING OR J/7 FOR WELDS TO SLEEVE)



OPTIONAL SECTION E1
SCALE: 3"=1'-0"
SILL SHOWN; HEAD SIMILAR

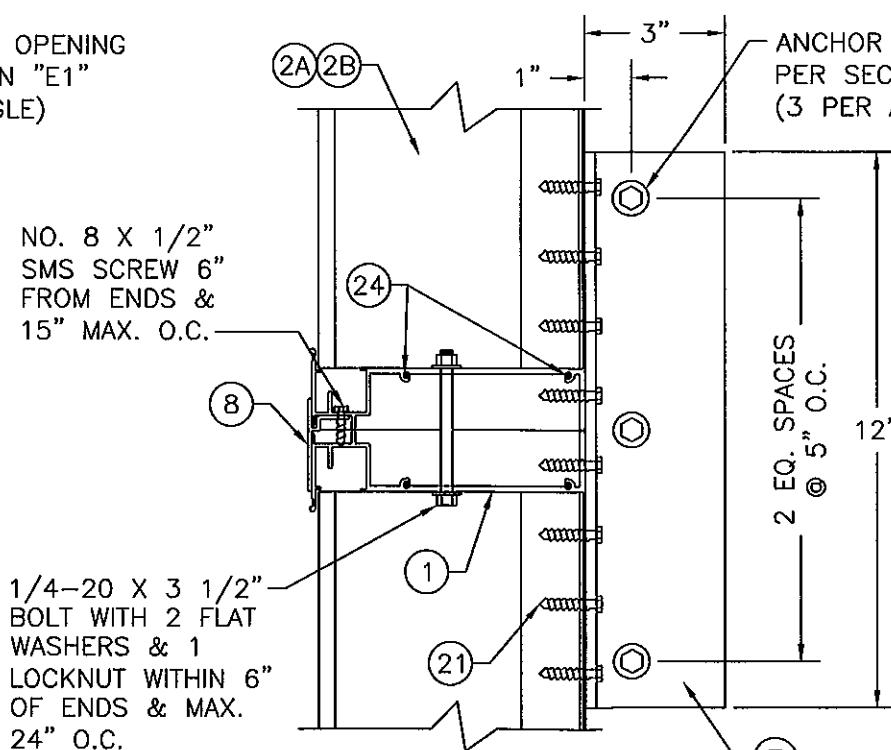


OPTIONAL SECTION E2
SCALE: 3"=1'-0"
SILL SHOWN; HEAD SIMILAR



SECTION F1
SCALE: 3"=1'-0"

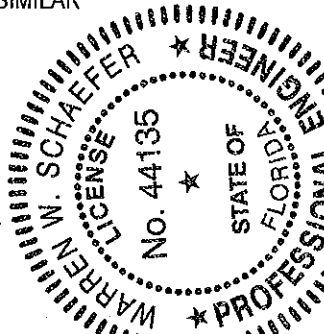
NO. 8 X 1/2" SMS SCREW 6" FROM ENDS & 15" MAX. O.C.
1/4-20 X 3 1/2" BOLT WITH 2 FLAT WASHERS & 1 LOCKNUT WITHIN 6" OF ENDS & MAX. 24" O.C.



SECTION F2
SCALE: 3"=1'-0"

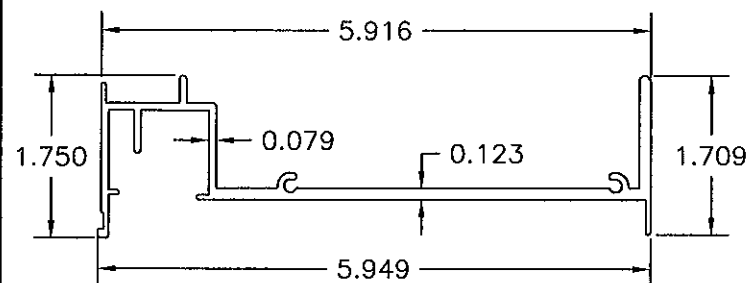
NO. 8 X 1/2" SMS SCREW 6" FROM ENDS & 15" MAX. O.C.
1/4-20 X 3 1/2" BOLT WITH 2 FLAT WASHERS & 1 LOCKNUT WITHIN 6" OF ENDS & MAX. 24" O.C.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1117.09
Expiration Date 04/22/2014
By Miami Dade Product Control

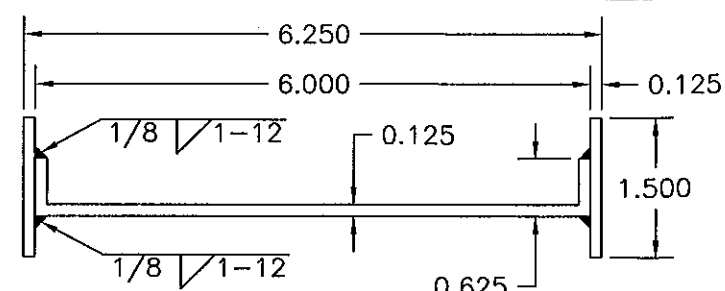


DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 12/02/05
DATE	BY
REVISION DESCRIPTION	NO.
EA-64 LOUVER SYSTEM MANUFACTURER ARROW UNITED INDUSTRIES 450 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888 CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE 561-744-3424	
NOV 07 2011 WARREN N. SCHAEFER, P.E. P.E. NO. 44135	DRAWING NO. 1464 REV. A SHEET NO. 6 OF 15

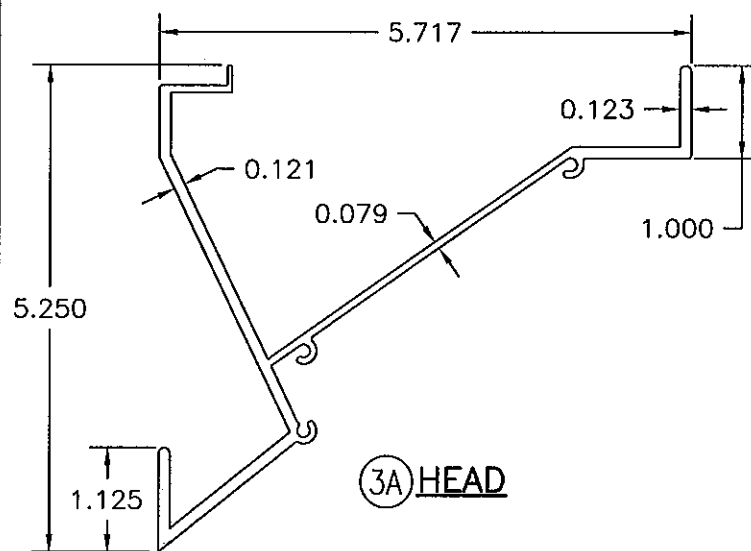
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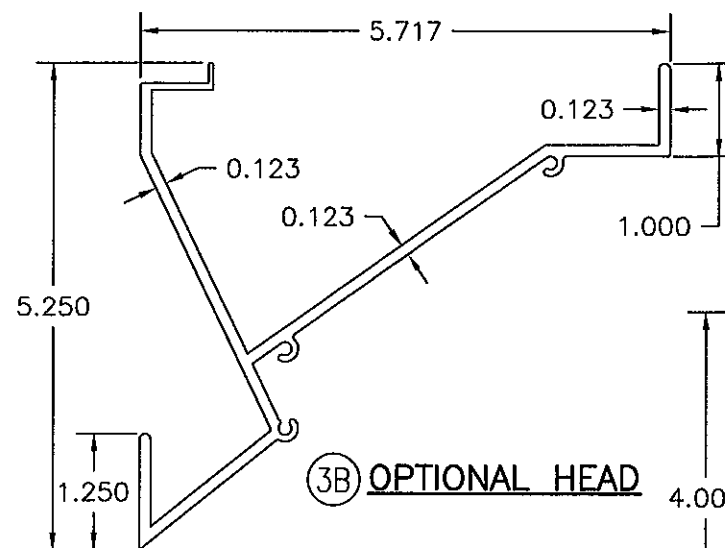
1A STANDARD STRAIGHT JAMB



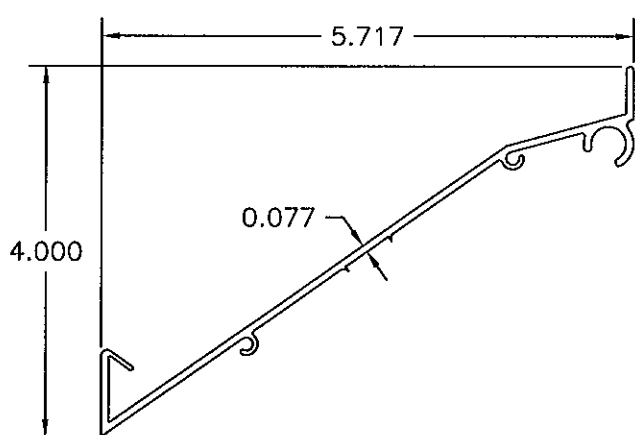
1B RADIUS JAMB



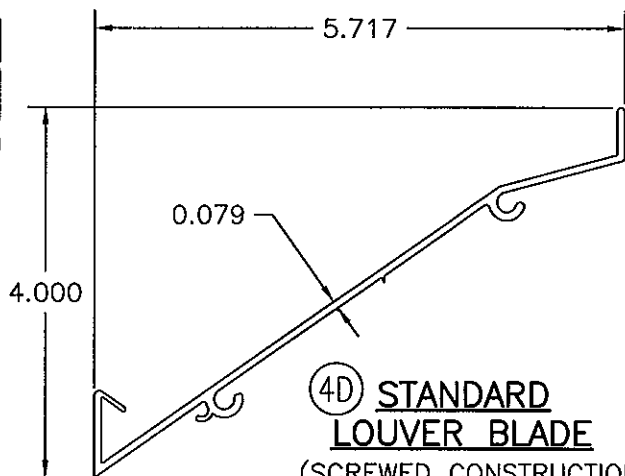
3A HEAD



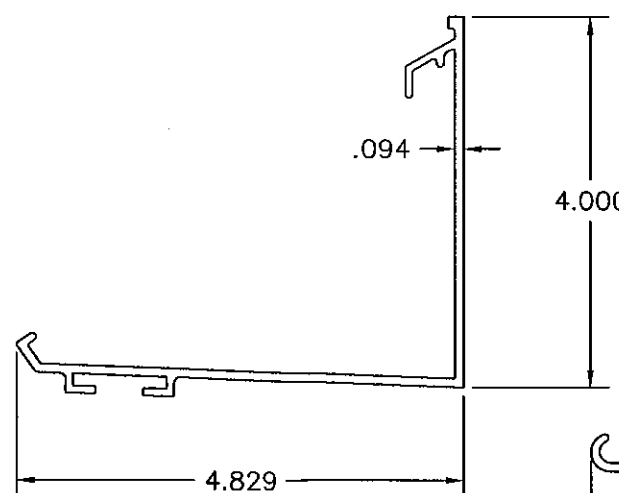
3B OPTIONAL HEAD



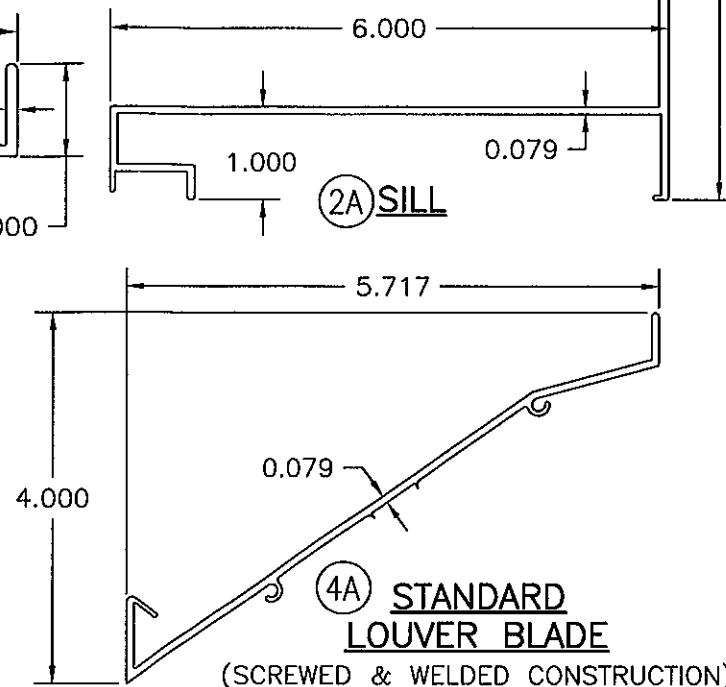
4C WATER RESISTANT LOUVER BLADE (SCREWED & WELDED CONSTRUCTION)



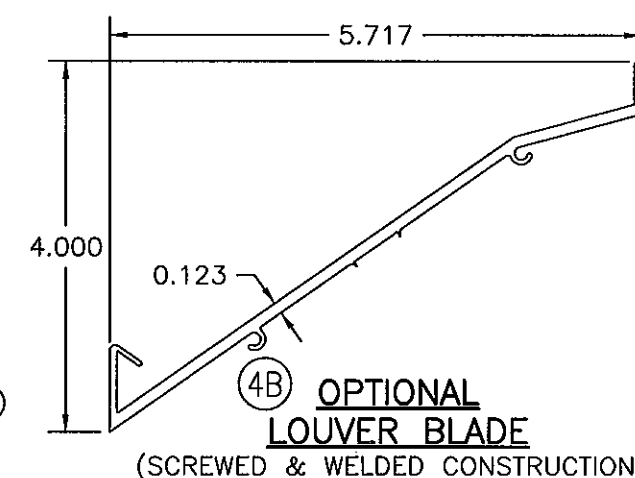
4D STANDARD LOUVER BLADE (SCREWED CONSTRUCTION)



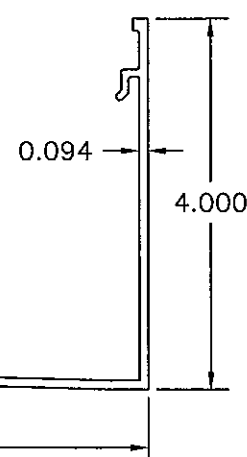
5A BLADE SUPPORT BRACKET (SCREWED CONSTRUCTION)



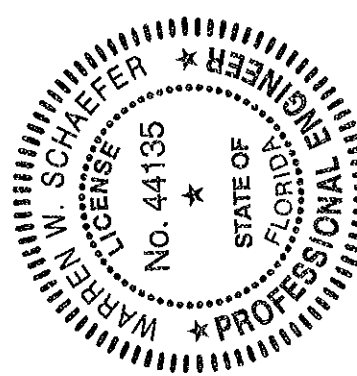
4A STANDARD LOUVER BLADE (SCREWED & WELDED CONSTRUCTION)



4B OPTIONAL LOUVER BLADE (SCREWED & WELDED CONSTRUCTION)



5 BLADE SUPPORT BRACKET (SCREWED & WELDED CONSTRUCTION)



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Miami Dade Product Control

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PLOT:	1=2	DATE:	12/02/03
DATE			
BY			
REVISION DESCRIPTION			
NO.			

DRAWING TITLE EA-64 LOUVER SYSTEM

MANUFACTURER ARROW UNITED INDUSTRIES
450 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

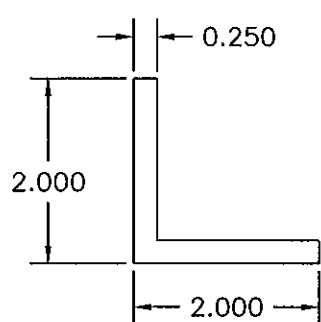
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

CERTIFICATION NOV 07 2011
WARREN W. SCHAEFER, P.E.
NO. 44135

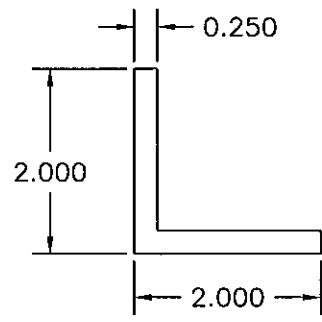
DRAWING NO. 1464 **REV.** A
SHEET NO. 8 **OF** 15

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1A	STANDARD STRAIGHT JAMB	6063-T6 ALUMINUM
1B	RADIUS JAMB	5052-H32 ALUMINUM
2A	SILL	6063-T6 ALUMINUM
2B	OPTIONAL SILL	6063-T5 ALUMINUM
3A	HEAD	6063-T5 ALUMINUM
3B	OPTIONAL HEAD	6063-T5 ALUMINUM
4A	STANDARD LOUVER BLADE (SCREWED & WELDED ENDS)	6063-T5 ALUMINUM
4B	OPTIONAL LOUVER BLADE (SCREWED & WELDED ENDS)	6063-T5 ALUMINUM
4C	(1) WATER RESISTANT LOUVER BLADE (SCREWED & WELDED ENDS)	6063-T5 ALUMINUM
4D	SCREWED END LOUVER BLADE	6063-T5 ALUMINUM
5A	BLADE SUPPORT BRACKET	6063-T5 ALUMINUM (USED WITH BLADE 4D)
5	BLADE SUPPORT BRACKET	6063-T5 ALUMINUM (USED WITH BLADES 4A, 4B & 4C)
6	BLADE SUPPORT ANGLE	6063-T5 ALUMINUM
7	MULLION END SUPPORT ANGLE	6061-T6 ALUMINUM
8	MULLION COVER	6063-T6 ALUMINUM
9	SIDE JAMB CLIP ANGLE	6061-T6 ALUMINUM
10	DAMPER BLADE	6063-T5 ALUMINUM (USED WITH PART 4B)
11A	STANDARD SILL PAN	16 GA. 5052-H32 ALUMINUM
11B	OPTIONAL SILL PAN	16 GA. 5052-H32 ALUMINUM
12	MOUNTING SLEEVE	5052-H32 ALUMINUM
13	CONTINUOUS MOUNTING ANGLE	6063-T5 ALUMINUM
14	MULLION END SUPPORT ANGLE	6063-T5 ALUMINUM
15	CONTINUOUS MOUNTING ANGLE	6063-T5 ALUMINUM
FASTENERS		
20	1/4-14 X 1 1/4" SELF DRILLING SCREW	1 THROUGH SUPPORT ANGLE AT EACH SUPPORT BRACKET AND AT HEAD & SILL
21	1/4-14 X 1 1/4" HILTI TEK SCREW	10 PER MULLION SUPPORT ANGLE INTO FRAME
22	1/4-14 X 1 1/4" HILTI TEK SCREW	2 PER EACH CLIP ANGLE INTO JAMB
23	NO. 8 X 3/4" S.S. SMS	2 THROUGH JAMB INTO EACH LOUVER BLADE
24	NO. 8 X 3/4" S.S. SMS	2 THROUGH SILL INTO EACH SIDE & MULLION JAMB
25	1/4-14 X 1 1/2" SELF DRILLING SCREW	2 THROUGH JAMB INTO EACH LOUVER BLADE
26	1/4-14 X 1 1/4" SELF DRILLING SCREW	WITHIN 3" OF ENDS & MAX. 6" O.C.
27	1/4-14 X 1 1/4" SELF DRILLING SCREW	8 PER MULLION END SUPPORT ANGLE
28	1/4-14 X 1 1/4" SELF DRILLING SCREW	WITHIN 6" OF CORNERS & MAX. 12 1/2" O.C.
SEALS & SEALANTS		
32	BULB SEAL	MCL 743091

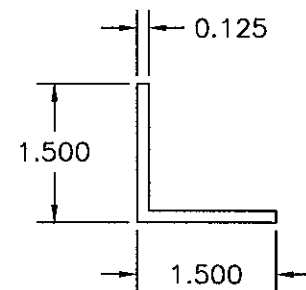
(1) PARTS 4C & 10 SHALL BE USED IN PLACE OF PART 4A OR 4B WHEN LOUVER IS REQUIRED TO RESIST WATER PENETRATION.



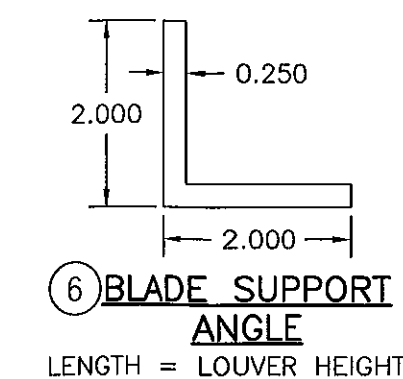
⑬ CONTINUOUS MOUNTING ANGLE



⑭ MULLION END SUPPORT ANGLE
LENGTH = 12"

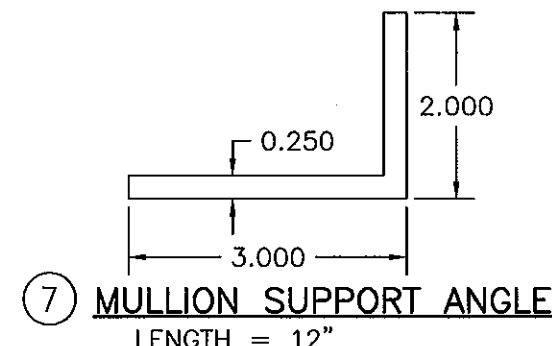


⑮ CONTINUOUS MOUNTING ANGLE



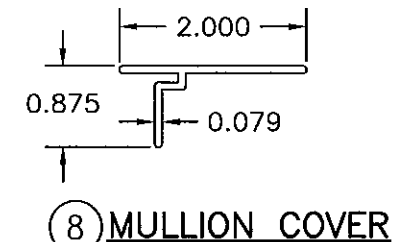
⑥ BLADE SUPPORT ANGLE

LENGTH = LOUVER HEIGHT

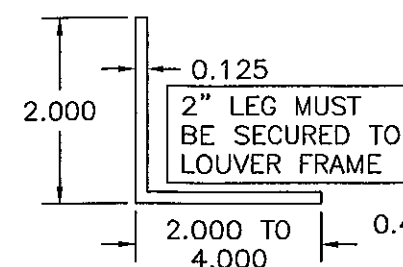


⑦ MULLION SUPPORT ANGLE

LENGTH = 12"

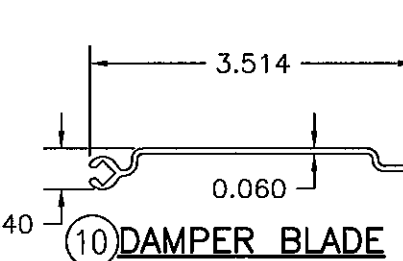


⑧ MULLION COVER

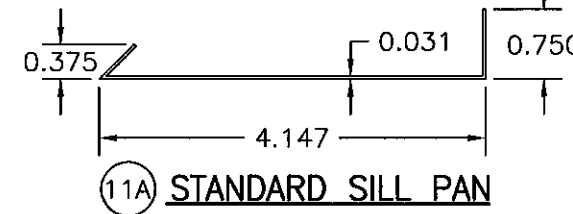


⑨ SIDE JAMB CLIP ANGLE

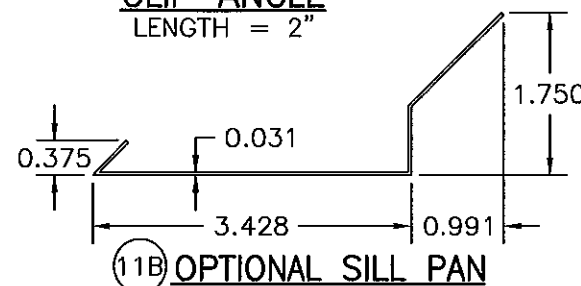
LENGTH = 2"



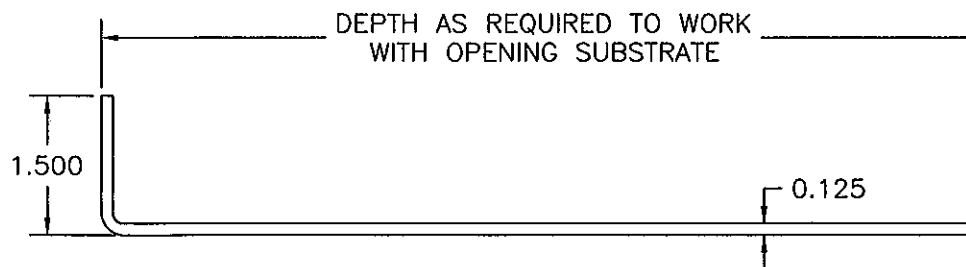
⑩ DAMPER BLADE



⑪A STANDARD SILL PAN



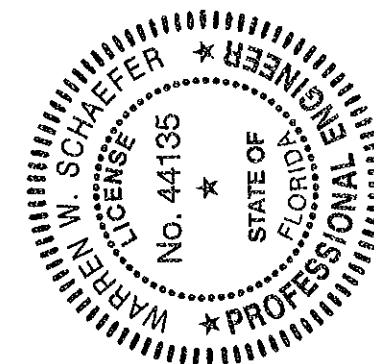
⑪B OPTIONAL SILL PAN



⑫ MOUNTING SLEEVE

(CONTINUOUS AT ALL SIDES; WELDED AT CORNERS)

PRODUCT REVISED
as complying with the Florida
Building Code
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Expiration Date 04/23/2014
By [Signature]
Miami Dade Product Control



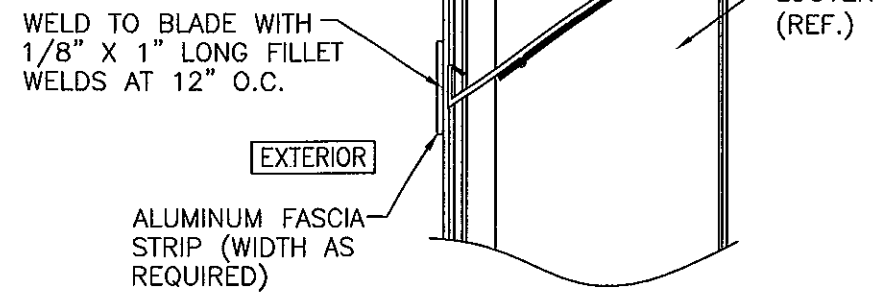
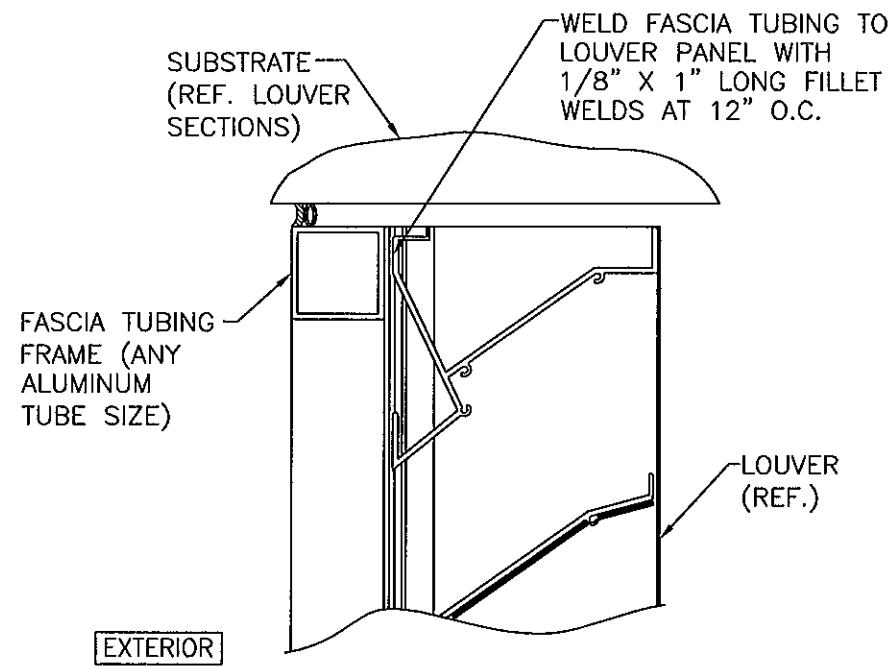
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 12/02/05
DATE	BY
REVISION DESCRIPTION	NO.
MANUFACTURER ARROW UNITED INDUSTRIES 450 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
DRAWING TITLE EA-64 LOUVER SYSTEM	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION NOV 07 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1464	REV. A
SHEET NO. 9 OF 15	

DRAWN BY:	W.R.M.	CHECKED BY:	W.W.S.
PLOT:	1=4	DATE:	12/02/05
NO.		DATE	
BY			
REVISION DESCRIPTION			

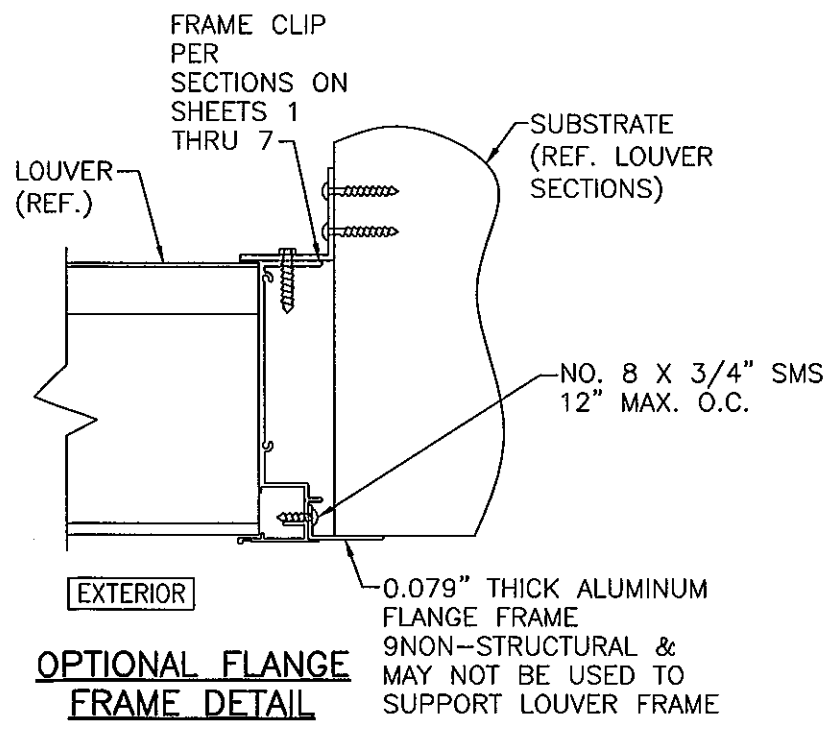
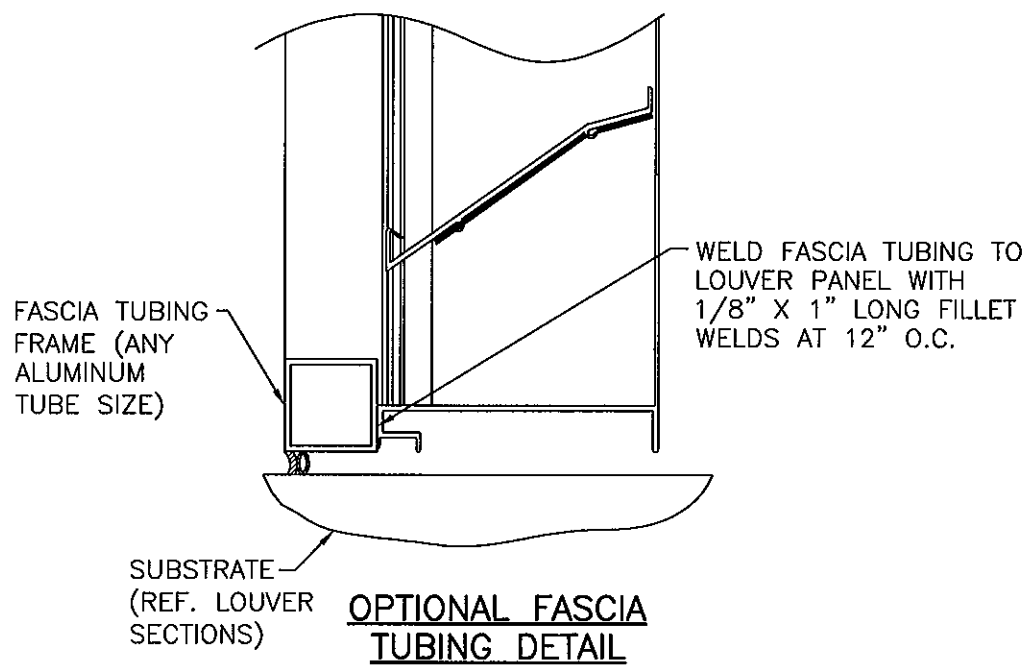
DRAWING TITLE	EA-64 LOUVER SYSTEM
MANUFACTURER	ARROW UNITED INDUSTRIES 450 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888
CONSULTANTS	W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424

CERTIFICATION	NOV 07 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO.	1464
REV.	A
SHEET NO.	10 OF 15

FOR LOUVER DETAILS,
SEE SHEETS 1-9

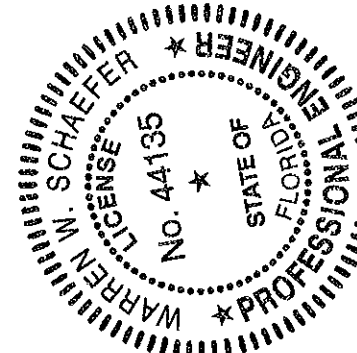


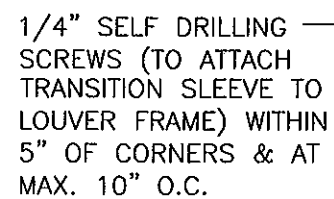
OPTIONAL FASCIA
STRIP DETAIL



OPTIONAL FLANGE
FRAME DETAIL

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1117.09
Expiration Date 12/12/2014
By [Signature]
Miami Dade Product Control





✓ SUBSTRATE
(REF. LOUVER
SECTIONS)

1/4" X 1"
CONTINUOUS
PVC GASKET

EXTERIOR

LOUVER
PANEL
(REF.)

- VARIES

1/4" SELF DRILLING
SCREWS (TO ATTACH
TRANSITION SLEEVE TO
LOUVER FRAME) WITHIN 5"
OF CORNERS & AT MAX.
10" O.C.

1/4" X 1" —
CONTINUOUS
PVC GASKET

- SUBSTRATE
(REF.
LOUVER
SECTIONS)

VERTICAL CROSS SECTION
DUCT TRANSITION SLEEVE DETAIL

1/4" SELF DRILLING —
SCREWS (TO ATTACH
TRANSITION SLEEVE TO
LOUVER FRAME) WITHIN
5" OF CORNERS & AT
MAX. 10" O.C.

3 x 2 x 1/8 ———
CONTINUOUS ANGLE
SHIP ATTACHED

DUCT TRANSITION
SLEEVE FOR
CONNECTION OF
DUCTS TO
LOUVER FRAME

1/4" SELF DRILLING SCREWS
(TO ATTACH TRANSITION
SLEEVE TO LOUVER BLADE)
THROUGH EVERY OTHER
LOUVER BLADE

DUCT TRANSITION SLEEVE
FOR CONNECTION OF DUCTS
TO LOUVER FRAME

INSTALLATION
CLIP (REF.
LOUVER
SECTIONS)

SUBSTRATE
(REF.
LOUVER
SECTIONS)

1/4" X 1"
CONTINUOUS
PVC GASKET

LOUVER
PANEL
(REF.)

EXTERIOR

— LOUVER WIDTH

DUCT TRANSITION
SLEEVE JAMB DETAIL

FOR LOUVER DETAILS,
SEE SHEETS 1-9

2 x 2 x 1/4—
MULLION ANGLE

DUCT TRANSITION
SLEEVE FOR
CONNECTION OF
DUCTS TO
LOUVER FRAME

1/4" SELF DRILLING
SCREW ATTACHED TO
BACKER PLATE WITHIN
5" OF CORNERS &
AT MAX. 10" O.C.

1/4" X 1"—
CONTINUOUS
PVC GASKET

1/4" SELF DRILLING-
SCREW INTO EACH
BLADE BRACE (REF.)

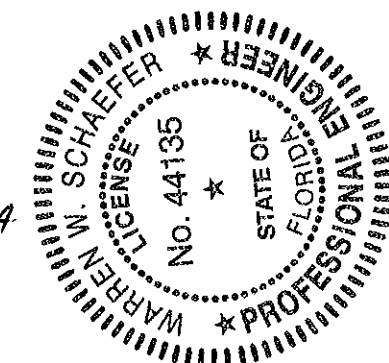
— 8 GA. (.125"
THICK) X 4" WIDE
CONTINUOUS
ALUMINUM BACKER
PLATE

LOUVER
PANEL
(REF.)

EXTERIOR

DUCT TRANSITION SLEEVE
SECTION AT BLADE STIFFENER

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 11-1117.09
Expiration Date 04/22/2014
By [Signature]
Miami Dade Product Control

[illegible]

EA-64 LOUVER SYSTEM

ARROW UNITED INDUSTRIES
450 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

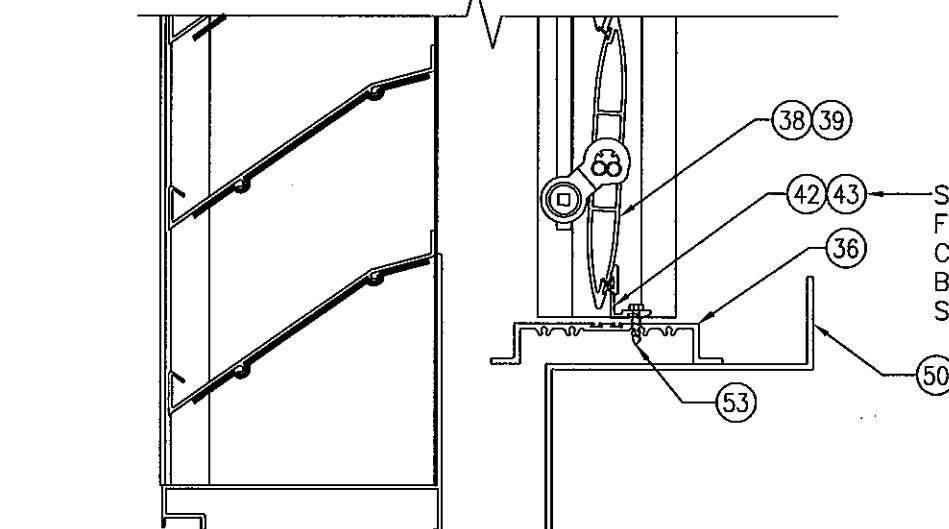
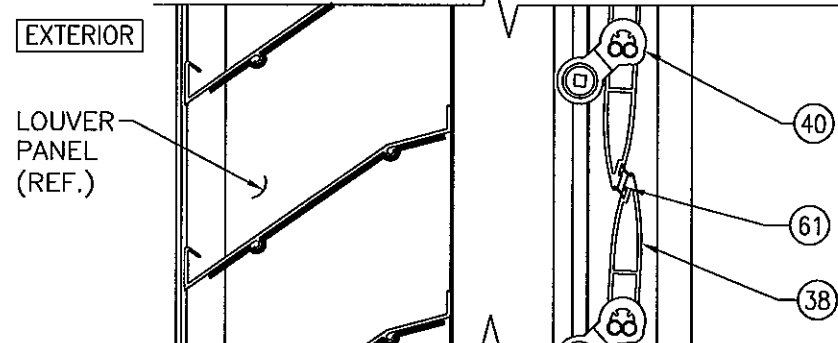
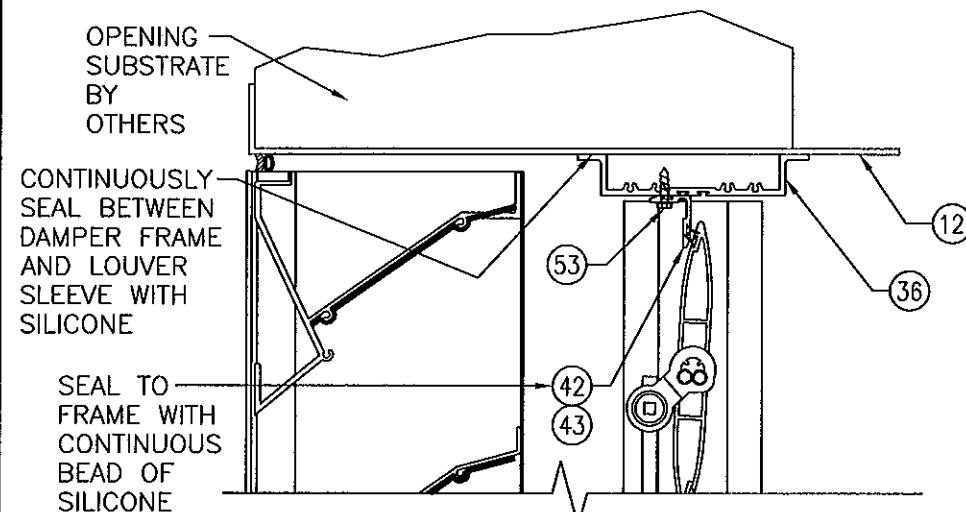
CONSULTANTS
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A. (CA 6809)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

DRAWING TITLE

CERTIFICATION

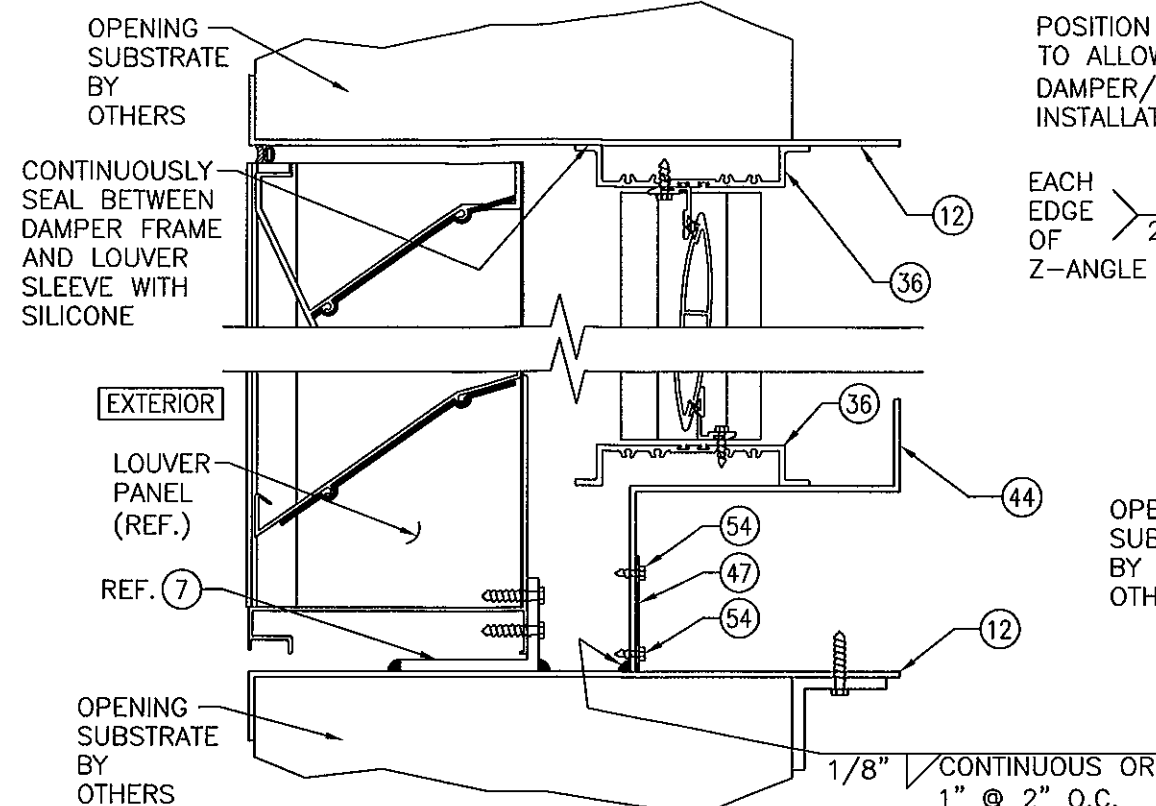
NOV 07 2011
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

DRAWING NO. 1464	REV. A
SHEET NO. 13 OF 15	



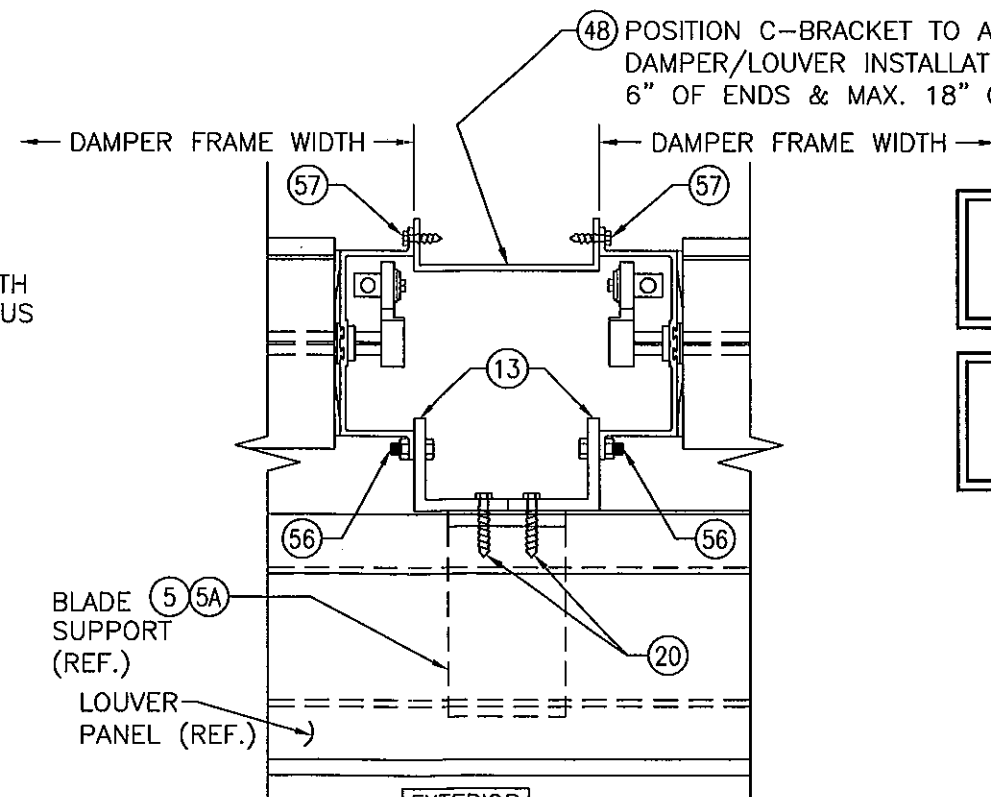
**VERTICAL CROSS SECTION WITH
AFD-20 DAMPER WHEN NO LOUVER
MULLIONS EXIST**

(DAMPER OPERATOR NOT SHOWN, IS PART OF THIS
APPROVAL)



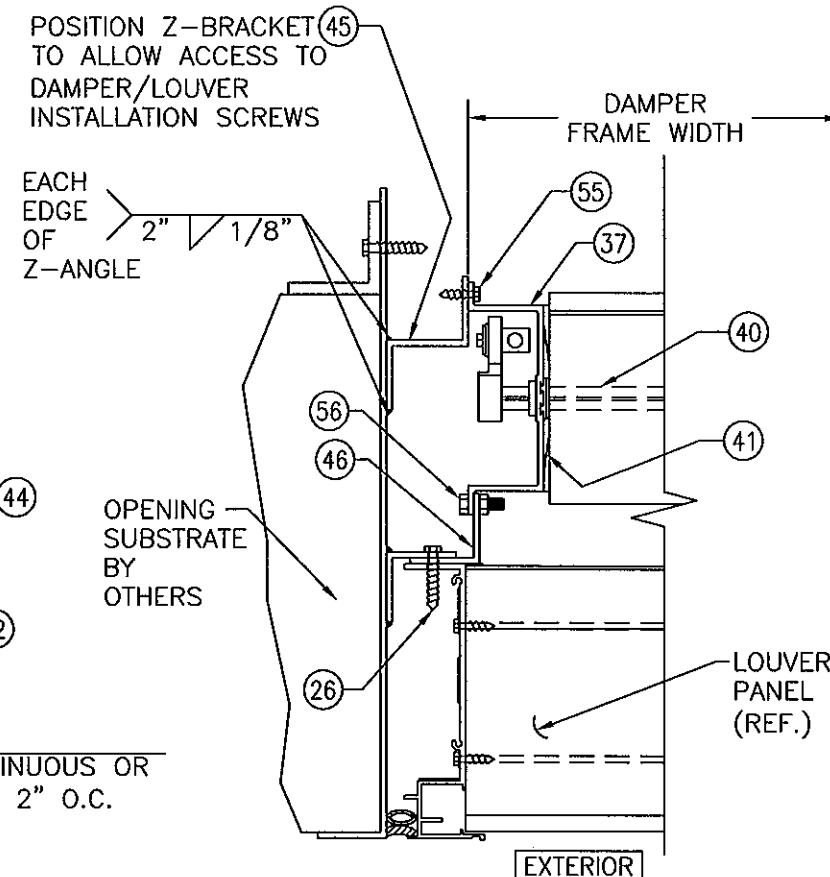
**VERTICAL CROSS SECTION WITH
AFD-20 DAMPER WHEN LOUVER MULLION EXISTS**

(FOR DAMPER DETAIL NOT SHOWN, SEE OTHER VERTICAL CROSS
SECTION ON THIS SHEET)



**AFD-20 DAMPER MULLION SECTION AT LOUVER
MID-SPAN PANEL**

(FOR DAMPER DETAIL NOT SHOWN, SEE HORIZONTAL CROSS SECTION
AFD-20 DAMPER DETAIL THIS SHEET)



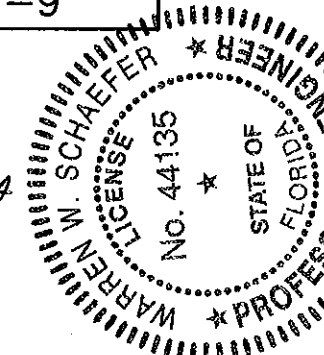
**HORIZONTAL CROSS SECTION
AFD-20 DAMPER DETAIL**

MAX. WIDTH OF ANY SINGLE
AFD-20 DAMPER PANEL IS 48"

SEAL ALL STITCH WELDED SEAMS
WITH SILICONE SEALANT

FOR LOUVER DETAILS,
SEE SHEETS 1-9

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1117.09
Expiration Date 04/22/2014
By [Signature]
Miami Trade Product Control



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=4		DATE: 12/02/05	
NO.	REVISION DESCRIPTION	DATE	BY
1			
2			
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4			
5			
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7			
8			
9			
10			
DRAWING TITLE EA-64 LOUVER SYSTEM			
MANUFACTURER ARROW UNITED INDUSTRIES 450 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
DATE NOV 07 2011			
DRAWING NO. 1464			
SHEET NO. 14 OF 15			

